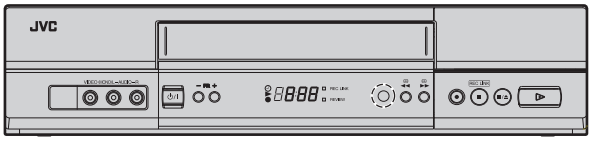
JVC

# SERVICE MANUAL

## VIDEO CASSETTE RECORDER

# HR-V600AA,HR-V600AG



G-CODE™ / SHOWVIEW™
VHS PAL NTSC SQPB
Hi-Fi

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700 (MECHANISM ASSEMBLY).

**Regarding service information other than these sections, refer to the service manual No. 82961 (HR-S5960EX). Also, be sure to note important safety precautions provided in the service manual.**

## SPECIFICATION

### GENERAL

| | |
|---|---|
| Power requirement | |
| Rating | AC110 V - 240V~, 50Hz/60Hz |
| Operating | AC90 V - 260V~, 50Hz/60Hz |
| Power consumption | 14 W |
| Temperature | |
| Operating | 5°C to 40°C |
| Storage | -20°C to 60°C |
| Operating position | Horizontal only |
| Dimensions (W x H x D) | 400 mm × 94 mm × 265 mm |
| Weight | 2.9 kg |
| Format | VHS standard |
| Maximum recording time | |
| (SP) | 240min. with E-240 video cassette (PAL/MESECAM)<br>160min. with T-160 video cassette (NTSC) |
| (LP) | 80min. with E-240 video cassette (PAL/MESECAM) |
| (EP) | 480 min. with T-160 video cassette (NTSC) |

### VIDEO/AUDIO

| | |
|---|---|
| Signal system | PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields<br>NTSC colour and EIA monochrome signals, 525lines/60 fields |
| Recording system | DA-4 (Double Azimuth) head helical scan system |
| Signal-to-noise ratio | 45 dB |
| Horizontal resolution | 250 lines (PAL/MESECAM)<br>220 lines (NTSC) |
| Frequency range | |
| Normal audio | 70 Hz to 10,000 Hz |
| Hi-Fi audio | 20 Hz to 20,000 Hz |
| Input/Output | RCA connectors (IN ×2, OUT ×1) |

### TUNER/TIMER

| | |
|---|---|
| TV channel storage capacity | 99 positions (+AUX position) |
| Tuning system | Frequency synthesized tuner |
| Channel coverage | |
| VHF | (Low) 42 MHz -175MHz<br>(High)175MHz - 470 MHz |
| UHF | 470 MHz - 870 MHz |
| Aerial output | UHF channels (Adjustable E28 - E60) |
| Memory backup time | Approx. 6 months<br>Estimated figure based on supplied fresh battery; actual performance may differ. |

### ACCESSORIES

| | |
|---|---|
| Provided accessories | : RF cable, Lithium battery CR2025, Infrared remote control unit, “R6/UM-3” battery ×2 |

Specifications shown are for SP mode unless specified otherwise.
E. & O.E. Design and specifications subject to change without notice.

HR-V600AA,HR-V600AG V16D1

COPYRIGHT © 2003 VICTOR COMPANY OF JAPAN, LTD.

**No.82979**
**2003/06**

# DIFFERENCE LIST

**DIFFERENT TABLE OF FEATURE**

The following table indicates main different points between models HR-S5960EX, HR-V600AA and HR-V600AG.

| ITEM | HR-S5960EX | HR-V600AA | HR-V600AG |
|---|---|---|---|
| POWER VOLTAGE (RATING) | 220-240V(AUTO) / 50/60Hz | 110-240V/50/60Hz | ← |
| POWER PLUG | CEE | AS/NZS | CEE |
| POWER SAVE | DISPLAY OFF,MENU | NOT USED | ← |
| AUTO POWER OFF | USED | NOT USED | ← |
| MULTI-BRAND REMOTE CONTROL | NOT USED | TV,CABLE/SAT/DVD | ← |
| IR CODE (RCU) | A | A,B | ← |
| HEAD CLEANER | NOT USED | USED | ← |
| SHUTTLE SEARCH(LATCH)-PAL | SP/LPx9 | SP/LPx7 | ← |
| SHUTTLE SEARCH(LATCH)-NTSC | NOT USED | SPx7, EPx21 | ← |
| VHS | PAL/MESECAM(MANUAL)/ NTSC PB on PAL TV with HiFi | PAL/MESECAM /NTSC3.58/4.43 /NTSC PB on PAL TV with HiFi | ← |
| S-VHS | USED | NOT USED | ← |
| S-VHS ET | USED(PAL SP MODE) | NOT USED | ← |
| SQPB | NOT USED | USED(PAL/NTSC SP MODE) | ← |
| RECORDING & PLAYBACK SPEED | SP,LP | PAL:SP,LP NTSC:SP,EP | ← |
| FRONT INPUT | NOT USED | VIDEO,AUDIO(L/R) | ← |
| REAR L-1 INPUT | SCART IN/OUT(Y/C) | VIDEO,AUDIO(L/R) | ← |
| REAR L-2 INPUT | SCART IN(Y/C)/DECODER | NOT USED | ← |
| AV OUTPUT | SCART OUT(Y/C),AUDIO(L/R) | VIDEO,AUDIO(L/R) | ← |
| BROADCASTING STANDARD | B/G,D/K | B/G,D/K,I | ← |
| STEREO DECODER | NICAM/A2 | A2(BG)/NICAM(I,BG,DK) | ← |
| RF OUT CH/RF OUT SYSTEM[INITIAL] | 22-69CH/OFF[AUTO],G,K | 28-60CH[36]/G,[H],K,I | 28-60CH[36]/[G],H,K,I |
| BACKUP TIME | 10 MINUTES | 6 MONTHS(Lithium) | ← |
| AUTO CLOCK / JUST CLOCK | USED | NOT USED | ← |
| VCR PLUS+ | SHOWVIEW | NOT USED | G-CODE/SHOWVIEW |
| AUTO GUIDE CH SET | USED | NOT USED | ← |
| REC LINK / INPUT | USED(L-2) | USED(L-1) | ← |
| TIMER WARNING w/OSD | USED | NOT USED | ← |
| VPS/PDC | USED | NOT USED | ← |
| IR CODE (DECK) | A | A,B | ← |
| DISPLAY TYPE / LANGUAGE | 6-DIGIT LED | 4-DIGIT LED | ← |
| POWER OFF DIMMER | NOT USED | USED | ← |
| REAL TIME COUNTER | USED | NOT USED | ← |
| TAPE REMAIN | USED(DISPLAY) | USED(OSD) | ← |
| OSD LANGUAGES | 13 LANGUAGES | 3 LANGUAGES | ← |

**Note:**

Mark ← is same as left.

**DIFFERENT TABLE OF PARTS LIST**

**PACKING AND ACCESSORY ASSEMBLY<M1>**

| ⚠ | REF NO. | ITEM | HR-S5960EX | HR-V600AA | HR-V600AG |
|---|---|---|---|---|---|
| | 301 | PACKING CASE | LP30855-004B | LP31255-001A | ← |
| | 302 | CUSHION ASSY | LP31187-001A | LP31247-001A | ← |
| | 303 | POLY BAG | PQM30021-093 | LP41038-002A | ← |
| ⚠ | 307 | LI BATTERY | QAB0057-001 | PECA0903 | ← |
| | 306 | REMOTE CTL UNIT | LP21138-003C | LP20878-018B | ← |
| | 306A | COVER(BATTERY) | LP40991-002B | LP40610-003A | ← |
| ⚠ | 310 | INST.BOOK(ENGLISH) | LPT0751-001B | LPT0795-001A | ← |
| ⚠ | 310 | INST.BOOK(GERMANY) | LPT0751-002B | - | - |
| ⚠ | 310 | INST.BOOK(FRENCH) | LPT0751-003A | - | - |
| ⚠ | 310 | INST.BOOK(DUTCH) | LPT0751-004A | - | - |
| ⚠ | 310 | INST.BOOK(SPANISH) | LPT0751-005A | - | - |
| ⚠ | 310 | INST.BOOK(ITALIAN) | LPT0751-006A | - | - |
| ⚠ | 310 | INST.BOOK(DANISH) | LPT0751-007A | - | - |
| ⚠ | 310 | INST.BOOK(FINNISH) | LPT0751-008A | - | - |
| ⚠ | 310 | INST.BOOK(SWEDISH) | LPT0751-009A | - | - |
| ⚠ | 310 | INST.BOOK(NORWEGIAN) | LPT0751-010A | - | - |
| ⚠ | 310 | INST.BOOK(PORTUGUESE) | LPT0751-011A | - | - |
| ⚠ | 310 | INST.BOOK(GREEK) | LPT0751-012A | - | - |
| ⚠ | 310 | INST.BOOK(CZECH) | LPT0751-013A | - | - |
| ⚠ | 310 | INST.BOOK(POLISH) | LPT0751-014A | - | - |
| ⚠ | 310 | INST.BOOK(HUNGARIAN) | LPT0751-015A | - | - |
| ⚠ | 310 | INST.BOOK(CHINESE) | - | - | LPT0795-002A |
| ⚠ | 310 | INST.BOOK(RUSSIAN) | - | - | LPT0795-003A |
| | 312 | RF CABLE | PEAC0300-02 | PEAC0348-02 | ← |
| | 316 | WARRANTY CARD | BT-54013-6 | BT-56012-1 | - |

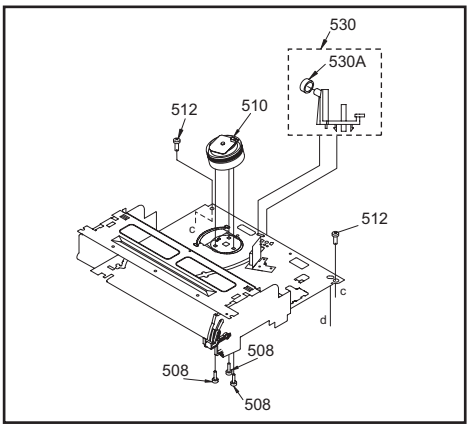
**Note:**

Mark ← is same as left.

Mark - is not used.

**FINAL ASSEMBLY<M2>**

| ⚠ | REF NO. | ITEM | HR-S5960EX | HR-V600AA | HR-V600AG |
|---|---|---|---|---|---|
| ⚠ | 501 | FRONT PANEL ASSY | LP10452-005C | LP10452-033A | LP10452-034A |
| | 501A | CASSETTE DOOR | LP21123-003B | LP21123-014A | ← |
| | 501C | COVER(WINDOW) | LP21127-001B | - | - |
| | 501D | WINDOW(1)/WINDOW(2) | LP31188-002A | LP21129-004A | LP21129-005A |
| | 501E | COVER(L) | LP31109-002A | - | - |
| | 501F | COVER(R) | LP30877-003A | LP30877-008A | ← |
| | 501G | STICKER | LP41035-004A | LP41064-003A | ← |
| ⚠ | 503 | TOP COVER | LP10013-051C | LP10013-045C | ← |
| ⚠ | 506 | BOTTOM COVER | LP10014-002C | - | - |
| | 507 | SCREW | DPSF3010Z | - | - |
| ⚠ | 509 | TERM.BOARD(PAL) | LP20317-011B | - | - |
| | 510 | DRUM FINAL ASSY | PDV2544A | PDV2539A | ← |
| | 513 | TAP SCREW | QYTDSF3010M | - | - |
| ⚠ | 514 | POWER CORD | QMP4A10-170 | QMP2990-220 | QMP4A10-170 |
| ⚠ | 515 | BOTTOM CHASSIS | LP10108-001L | LP10108-009K | ← |
| | 516 | EARTH PLATE(RF) | PQ21623-2-5 | - | - |
| | 519 | ROLLER ARM ASSY | LP40370-001F | - | - |
| | 520 | INERTIA PLATE | PQ45160 | - | - |
| | 530 | HEAD CLEANER ASSY | - | LP40910-002G | ← |
| | 530A | CLEANER | - | PQ46419-2 | ← |




**MECHANISM ASSEMBLY<M4>**

| ⚠ | REF NO. | ITEM | HR-S5960EX | HR-V600AA | HR-V600AG |
|---|---|---|---|---|---|
| | 4 | FE HEAD | QAH0082-001 | NAH0004-001 | ← |
| | 30 | ARM BASE | LP31020-004B | - | ← |
| | 31 | TAP SCREW | QYTDST2606Z | - | ← |
| | 48 | S-SWITCH | LP40930-002E | - | ← |
| | 52 | AC HEAD | QAH0081-001 | NAH0003-001 | ← |
| | 59 | LOADING MOTOR | QAR0023-001 | QAR0289-001 | ← |
| ⚠ | 85 | CAPSTAN MOTOR | QAR0224-002 | QAR0267-002 | ← |
| | 90 | IDLER GEAR2 | LP40829-001B | LP40829-002A | ← |
| | 119 | DRIVE ARM(R) | LP30979-001P | LP30979-001N | ← |
| | WR1 | E-CARD WIRE | WJT0059-001D | WJT0059-001E | ← |

**MAIN BOARD ASSEMBLY<03>**

| ⚠ | REF NO. | ITEM | HR-S5960EX | HR-V600AA | HR-V600AG |
|---|---|---|---|---|---|
| | PW1 | MAIN BOARD ASSY | LPA10189-02C | LPA10212-02B | LPA10212-04B |

**LITHIUM BATTERY BOARD ASSEMBLY<09>**

| ⚠ | REF NO. | ITEM | HR-S5960EX | HR-V600AA | HR-V600AG |
|---|---|---|---|---|---|
| | PW1 | LITHIUM BATTERY BOARD ASSY | - | LPA10088-01A4 | ← |
| | BT3001 | BATTERY HOLDER | - | QNZ0032-001 | ← |

**Note:**

Mark ← is same as left.
Mark - is not used.

# SECTION 3
# ADJUSTMENT

The difference point(s) compared with the reference model are as follows.

**DELETE**

**3.3.2 Video circuit**

**3.3.2.1 EE Y/PB Y (S-VHS/VHS) LEVEL**

**3.3.4 PAL/SECAM converter circuit [EF model]**

**3.3.4.1 Colour difference level**

**3.3.4.2 SECAM burst position**

## Adjustment procedure and value are changed.

**3.3.1 Servo circuit**

**3.3.1.1 Switching point**

| | | |
|---|---|---|
| Signal | (A1)<br>(A2) | • Stairstep signal<br>• Alignment tape(LP,stairstep,PAL) [MHPE-L] |
| Mode | (B) | • PB |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D1)<br>(D2) | • VIDEO OUT terminal (75 ohm terminated)<br>• TP106 (PB. FM) |
| External trigger | (E) | • TP111 (D.FF) |
| Adjustment part | (F) | • Jig RCU: Code ”5A” |
| Specified value | (G) | • 6.5 ± 0.5H |
| Adjustment tool | (H) | • Jig RCU [PTU94023B] |

(1) Play back the signal (A1) of the alignment tape (A2).
(2) Apply the external trigger signal to D.FF (E) to observe the VIDEO OUT waveform and V.PB FM waveform at the measuring points (D1) and (D2).
(3) Set the VCR to the manual tracking mode.
(4) Adjust tracking so that the V.PB FM waveform becomes maximum.
(5) Set the VCR to the Auto adjust mode by transmitting the code (F) from the Jig RCU. When the VCR enters the stop mode, the adjustment is completed.
(6) If the VCR enters the eject mode, repeat steps (1) to (5) again.
(7) Play back the alignment tape (A2) again, confirm that the switching point is the specified value (G).

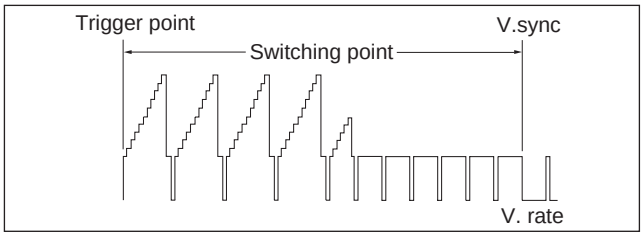



Fig.3-3-1a Switching point

JVC

**VICTOR COMPANY OF JAPAN, LIMITED**
AV & MULTIMEDIA COMPANY VIDEO RECORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.82979)

Printed in Japan
200306WPC

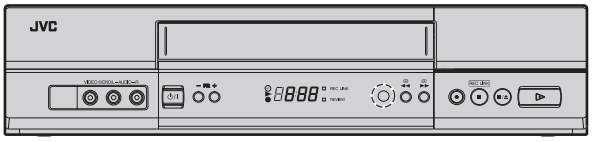
JVC

# SCHEMATIC DIAGRAMS

## VIDEO CASSETTE RECORDER

# HR-V600AA,HR-V600AG

**CD-ROM No.SML200307**



G-CODE™ / SHOWVIEW™
VHS PAL NTSC SQPB
Hi-Fi

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700 (MECHANISM ASSEMBLY).

**Regarding service information other than these sections, refer to the service manual No. 82961 (HR-S5960EX). Also, be sure to note important safety precautions provided in the service manual.**

## SPECIFICATION

### GENERAL

| | |
|---|---|
| Power requirement | |
| Rating | AC110 V - 240V~, 50Hz/60Hz |
| Operating | AC90 V - 260V~, 50Hz/60Hz |
| Power consumption | 14 W |
| Temperature | |
| Operating | 5°C to 40°C |
| Storage | -20°C to 60°C |
| Operating position | Horizontal only |
| Dimensions (W x H x D) | 400 mm x 94 mm x 265 mm |
| Weight | 2.9 kg |
| Format | VHS standard |
| Maximum recording time | |
| (SP) | 240min. with E-240 video cassette (PAL/MESECAM)<br>160min. with T-160 video cassette (NTSC) |
| (LP) | 80min. with E-240 video cassette (PAL/MESECAM) |
| (EP) | 480 min. with T-160 video cassette (NTSC) |

### VIDEO/AUDIO

| | |
|---|---|
| Signal system | PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields<br>NTSC colour and EIA monochrome signals, 525lines/60 fields |
| Recording system | DA-4 (Double Azimuth) head helical scan system |
| Signal-to-noise ratio | 45 dB |
| Horizontal resolution | 250 lines (PAL/MESECAM)<br>220 lines (NTSC) |
| Frequency range | |
| Normal audio | 70 Hz to 10,000 Hz |
| Hi-Fi audio | 20 Hz to 20,000 Hz |
| Input/Output | RCA connectors (IN x 2,OUT x1) |

### TUNER/TIMER

| | |
|---|---|
| TV channel storage capacity | 99 positions (+AUX position) |
| Tuning system | Frequency synthesized tuner |
| Channel coverage | |
| VHF | (Low) 42 MHz -175MHz<br>(High)175MHz - 470 MHz |
| UHF | 470 MHz - 870 MHz |
| Aerial output | UHF channels (Adjustable E28 - E60) |
| Memory backup time | Approx. 6 months<br>Estimated figure based on supplied fresh battery; actual performance may differ. |

### ACCESSORIES

| | |
|---|---|
| Provided accessories | : RF cable, Lithium battery CR2025, Infrared remote control unit, “R6/UM-3” battery · 2 |

Specifications shown are for SP mode unless specified otherwise.
E. & O.E. Design and specifications subject to change without notice.



COPYRIGHT © 2003 VICTOR COMPANY OF JAPAN, LTD.

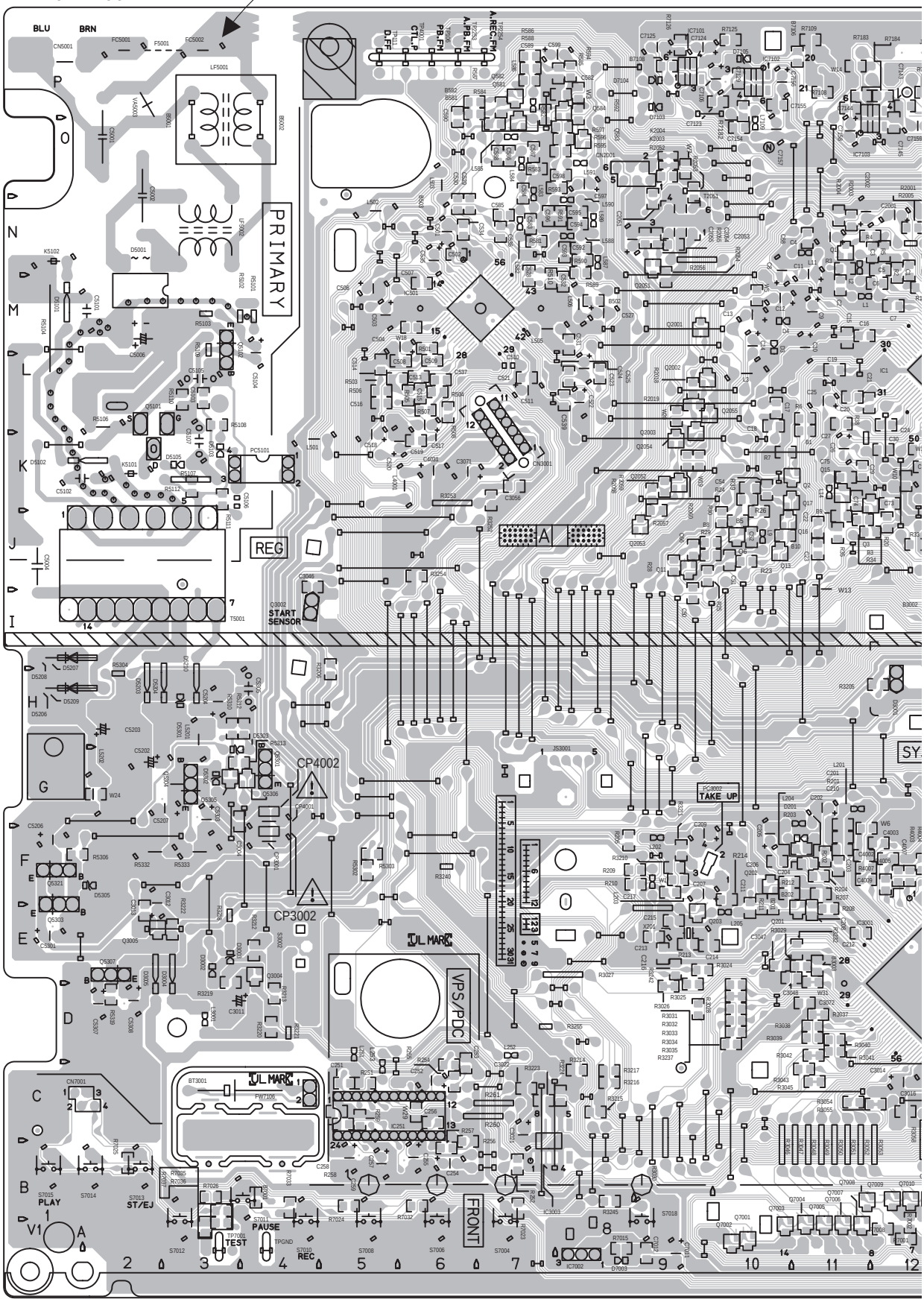
**No.82979SCH**
**2003/06**

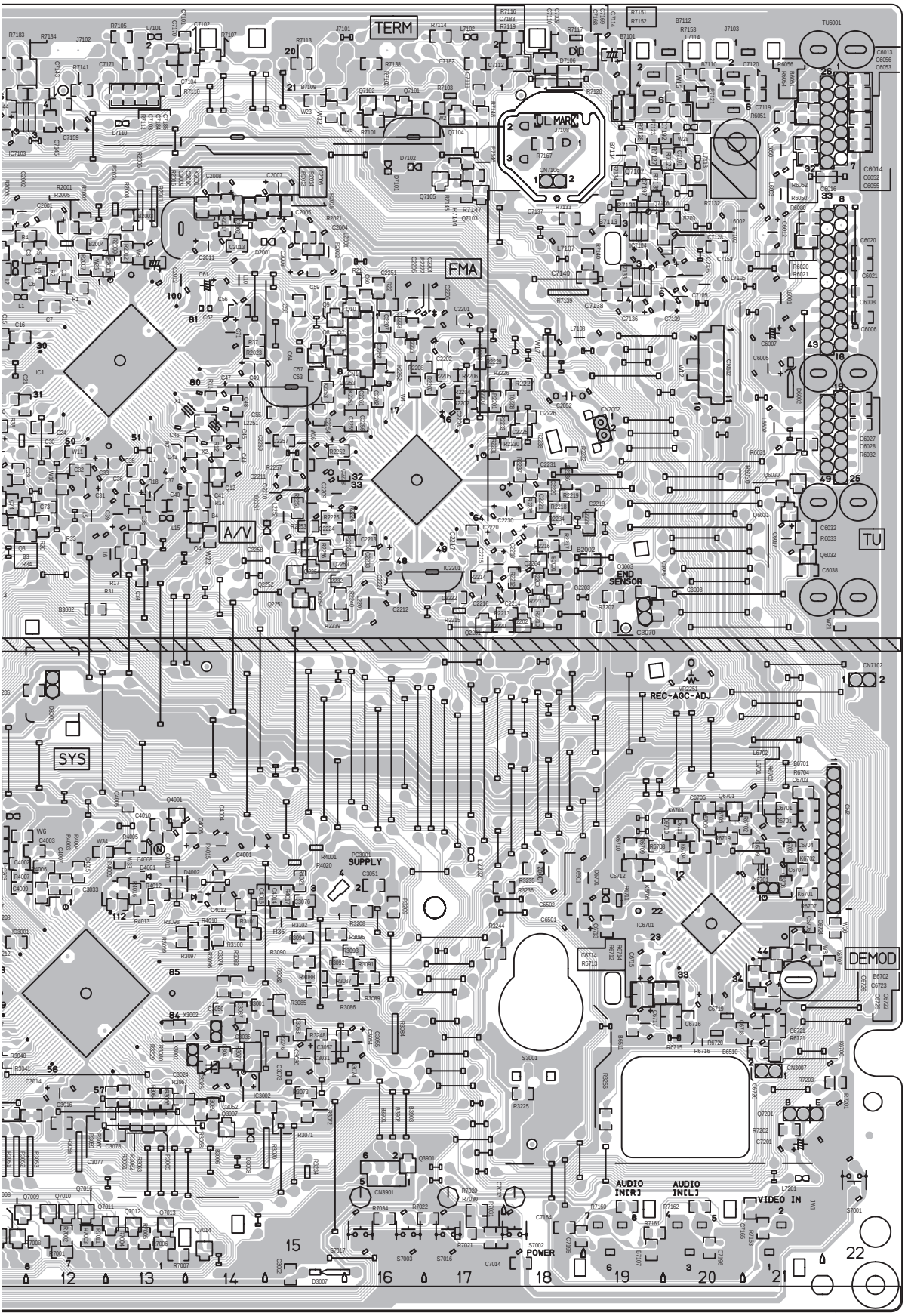
# CHARTS AND DIAGRAMS

## ■ MAIN CIRCUIT BOARD

DANGEROUS VOLTAGE

**<03> MAIN**
**LPB10212-001A**




TERM
FMA
A/V
SYS
TU
DEMOD
SUPPLY
POWER
REC-AGC-ADJ
END SENSOR
AUDIO INTRJ
AUDIO INTLJ
VIDEO IN
UL MARK

## COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10212-001A

| REF.NO. | LOCATION |
|---|---|
| **CAPACITOR** | |
| C1 | B C 12N |
| C2 | B C 11M |
| C3 | B C 12N |
| C4 | A D 11N |
| C5 | B C 12N |
| C6 | B C 12M |
| C7 | B C 12M |
| C8 | A D 10M |
| C9 | A D 11M |
| C10 | A D 11M |
| C11 | A D 11N |
| C12 | A D 10M |
| C13 | A D 10M |
| C14 | A D 10M |
| C15 | B C 11M |
| C16 | B C 11M |
| C17 | B C 10L |
| C18 | B C 10L |
| C19 | B C 11L |
| C20 | B C 11L |
| C21 | B C 11L |
| C22 | B C 11J |
| C23 | B C 11J |
| C24 | B C 12L |
| C25 | A D 11L |
| C26 | A D 11K |
| C27 | B C 11L |
| C29 | B C 11K |
| C30 | B C 12K |
| C31 | A D 12K |
| C32 | B C 12K |
| C33 | A D 12K |
| C34 | B C 13J |
| C35 | B C 13K |
| C36 | A D 13K |
| C37 | B C 13K |
| C38 | B C 13J |
| C39 | A D 13J |
| C40 | B C 13K |
| C41 | B C 14K |
| C43 | A D 14K |
| C44 | A D 14K |
| C45 | B C 14L |
| C46 | B C 14L |
| C47 | A D 14L |
| C48 | B C 14L |
| C49 | A D 14L |
| C50 | B C 9I |
| C51 | B C 10J |
| C52 | B C 10J |
| C54 | B C 10K |
| C55 | B C 15L |
| C56 | B C 14M |
| C57 | B C 15L |
| C58 | B C 15M |
| C59 | B C 15M |
| C60 | B C 16M |
| C61 | A D 14M |
| C62 | A D 14M |
| C63 | B C 15L |
| C64 | A D 15L |
| C66 | B C 9J |
| C68 | B C 11N |
| C71 | A D 14M |
| C73 | B C 12K |
| C74 | B C 11K |
| C75 | B C 11K |
| C201 | B C 11G |
| C202 | A D 11G |
| C203 | B C 11F |
| C204 | B C 11F |
| C205 | A D 10F |
| C206 | B C 10F |
| C207 | A D 9F |
| C208 | B C 11E |
| C209 | A D 9F |
| C210 | B C 11F |
| C211 | B C 10E |
| C212 | B C 11E |
| C213 | B C 9E |
| C214 | B C 9E |
| C215 | B C 9E |
| C216 | B C 9E |
| C217 | B C 9F |
| C251 | B C 5C |
| C252 | A D 6C |
| C253 | B C 6C |
| C254 | A D 6B |
| C255 | A D 6B |
| C256 | B C 6C |
| C257 | A D 5B |
| C258 | B C 5C |
| C259 | A D 5B |
| C501 | A D 6N |
| C502 | B C 6N |
| C503 | A D 5M |
| C504 | A D 6M |
| C506 | A D 5M |
| C507 | B C 6M |
| C508 | B C 6L |
| C509 | B C 6L |
| C510 | A D 7L |
| C511 | A D 7L |
| C513 | B C 6L |
| C514 | B C 5L |
| C515 | B C 6L |
| C516 | B C 5L |
| C517 | A D 6L |
| C518 | A D 5K |
| C519 | B C 6K |
| C520 | A D 6K |
| C521 | B C 7L |
| C522 | A D 8L |
| C523 | B C 8L |
| C524 | A D 8L |
| C525 | B C 8L |
| C527 | A D 8M |
| C528 | B C 7M |
| C529 | B C 6N |
| C530 | B C 6N |
| C531 | B C 8M |
| C532 | B C 8M |
| C534 | B C 6N |
| C535 | A D 6N |
| C536 | B C 7N |
| C537 | B C 6L |
| C539 | B C 8L |
| C582 | B C 8P |
| C583 | B C 7N |
| C584 | B C 7O |
| C585 | B C 7N |
| C586 | B C 7O |
| C587 | B C 7O |
| C588 | B C 7O |
| C589 | B C 7P |
| C590 | B C 6P |
| C592 | B C 8N |
| C593 | B C 8N |
| C594 | B C 8N |
| C595 | B C 8N |
| C596 | B C 7N |
| C597 | A D 8O |
| C598 | B C 8O |
| C599 | A D 7P |
| C2001 | A D 12N |
| C2002 | A D 11N |
| C2003 | A D 15N |
| C2004 | B C 15N |
| C2005 | A D 15N |
| C2006 | B C 15N |
| C2007 | A D 15O |
| C2008 | A D 14O |
| C2009 | B C 14N |
| C2010 | B C 14N |
| C2011 | A D 14N |
| C2012 | A D 13M |
| C2013 | B C 14N |
| C2051 | B C 9N |
| C2052 | A D 18L |
| C2053 | B C 9N |
| C2054 | B C 9N |
| C2055 | A D 8N |
| C2201 | A D 17M |
| C2202 | A D 17M |
| C2203 | A D 17L |
| C2204 | A D 17M |
| C2205 | A D 16M |
| C2206 | A D 17M |
| C2207 | B C 16M |
| C2208 | B C 15K |
| C2209 | A D 15K |
| C2210 | A D 15K |
| C2211 | A D 15K |
| C2212 | A D 16I |
| C2213 | B C 16J |
| C2214 | A D 18I |
| C2215 | A D 17J |
| C2216 | A D 17J |
| C2217 | B C 17J |
| C2218 | A D 18J |
| C2219 | A D 18J |
| C2220 | A D 17J |
| C2221 | B C 18K |
| C2222 | B C 17I |
| C2223 | B C 16M |
| C2224 | B C 15J |
| C2225 | B C 18L |
| C2226 | B C 18L |
| C2227 | A D 16J |
| C2228 | B C 19J |
| C2229 | B C 18K |
| C2230 | A D 17K |
| C2231 | A D 18K |
| C2232 | B C 15J |
| C2233 | B C 16J |
| C2251 | B C 16M |
| C2252 | B C 16M |
| C2253 | B C 16L |
| C2254 | A D 15L |
| C2255 | B C 16L |
| C2256 | B C 16L |
| C2257 | B C 15K |
| C2258 | B C 15J |
| C2259 | A D 15K |
| C2261 | B C 16L |
| C2262 | B C 16L |
| C3002 | B C 15A |
| C3004 | B C 3G |
| C3008 | B C 19J |
| C3011 | A D 4D |
| C3012 | A D 2E |
| C3013 | B C 2E |
| C3014 | A D 12C |
| C3016 | B C 12C |
| C3021 | A D 7C |
| C3022 | B C 7C |
| C3024 | B C 14D |
| C3025 | A D 14D |
| C3030 | A D 15D |
| C3031 | B C 15D |
| C3033 | B C 13F |
| C3036 | B C 14D |
| C3037 | B C 14D |
| C3041 | B C 14D |
| C3045 | B C 19I |
| C3046 | B C 4J |
| C3047 | B C 10E |
| C3048 | B C 11E |
| C3050 | B C 14D |
| C3051 | B C 16F |
| C3052 | A D 14C |
| C3053 | B C 15D |
| C3054 | B C 15D |
| C3055 | A D 16D |
| C3056 | B C 7K |
| C3057 | B C 15D |
| C3070 | B C 19I |
| C3071 | A D 6K |
| C3072 | B C 11D |
| C3073 | A D 15C |
| C3074 | B C 14E |
| C3076 | B C 15F |
| C3077 | B C 12C |
| C3078 | B C 13C |
| C4001 | A D 14F |
| C4002 | B C 11F |
| C4003 | B C 12F |
| C4004 | A D 14F |
| C4005 | B C 13G |
| C4006 | A D 14F |
| C4007 | B C 12F |
| C4008 | A D 13F |
| C4009 | B C 11F |
| C4010 | B C 13G |
| C4011 | B C 13F |
| C4012 | A D 14F |
| C4014 | B C 15F |
| C4015 | B C 12F |
| C4016 | B C 14F |
| C4031 | A D 6K |
| C7191 | B C 20O |
| C7192 | B C 20O |
| C7195 | B C 18A |
| C7196 | B C 20A |
| C7197 | B C 19O |
| C7201 | A D 21C |
| **CONNECTOR** | |
| CN1 | A D 16M |
| CN2 | A D 22F |
| CN512 | A D 20M |
| CN2001 | A D 9O |
| CN2002 | A D 19L |
| CN3001 | A D 2H |
| CN3007 | A D 21D |
| CN3901 | A D 16B |
| CN5001 | A D 1P |
| CN7001 | A D 1C |
| CN7102 | A D 22H |
| CN7106 | A D 18O |
| **DIODE** | |
| D3 | A D 10M |
| D4 | A D 11M |
| D201 | A D 11F |
| D2001 | A D 15N |
| D2251 | A D 15J |
| D3001 | A D 12H |
| D3002 | A D 3D |
| D3003 | A D 3E |
| D3004 | A D 3E |
| D3005 | A D 2E |
| D3007 | A D 16A |
| D3008 | A D 14C |
| D4001 | B C 13F |
| D4002 | B C 14F |
| D5001 | B C 2M |
| D5101 | A D 1M |
| D5102 | A D 2K |
| D5103 | A D 3K |
| D5105 | A D 3K |
| D5203 | A D 2I |
| D5204 | A D 3I |
| D5206 | A D 2H |
| D5207 | A D 2I |
| D5208 | A D 2I |
| D5209 | A D 2H |
| D5210 | A D 3I |
| D5301 | A D 3H |
| D5302 | A D 3G |
| D5303 | A D 4G |
| D5305 | A D 2F |
| D6002 | A D 21L |
| D6701 | A D 19F |
| D7003 | A D 8A |
| D7101 | A D 16O |
| D7102 | A D 17O |
| D7103 | A D 9P |
| D7104 | A D 9P |
| D7105 | A D 10P |
| D7106 | A D 18P |
| DI7001 | A D 12A |
| **IC** | |
| IC1 | B C 13L |
| IC251 | A D 5C |
| IC501 | B C 7M |
| IC2201 | B C 16K |
| IC3001 | B C 12D |
| IC3002 | B C 14D |
| IC3003 | B C 7B |
| IC6701 | B C 20E |
| IC7002 | A D 8A |
| IC7101 | B C 9P |
| IC7102 | B C 10P |
| IC7103 | B C 12O |
| IC7104 | B C 19N |
| IC7105 | B C 19M |
| **COIL** | |
| L1 | A D 12M |
| L2 | A D 11M |
| L3 | A D 10L |
| L5 | A D 12K |
| L6 | A D 13J |
| L7 | A D 13K |
| L9 | A D 10J |
| L10 | A D 14M |
| L11 | A D 11N |
| L14 | A D 11K |
| L15 | A D 13J |
| L201 | A D 11G |
| L202 | A D 9F |
| L203 | A D 9F |
| L204 | A D 11G |
| L205 | A D 10E |
| L251 | A D 5C |
| L252 | A D 7D |
| L253 | A D 5C |
| L501 | A D 5K |
| L502 | A D 5N |
| L503 | A D 6N |
| L505 | A D 8M |
| L506 | A D 8M |
| L582 | A D 7N |
| L583 | A D 7N |
| L584 | A D 7O |
| L585 | A D 7O |
| L586 | A D 7P |
| L587 | A D 8N |
| L588 | A D 8N |
| L589 | A D 8N |
| L590 | A D 8N |
| L591 | A D 8O |
| L2001 | A D 15N |
| L2201 | A D 16J |
| L2202 | A D 17F |
| L2251 | A D 15L |
| L2252 | A D 15K |
| L3001 | A D 3D |
| L3002 | A D 18F |
| L4001 | A D 6K |
| L5201 | A D 3H |
| L5202 | A D 2G |
| L6001 | A D 21M |
| L6002 | A D 21N |
| L6003 | A D 21N |
| L6050 | A D 21O |
| L6501 | A D 19F |
| L6502 | A D 21L |
| L6701 | A D 21G |
| L6702 | A D 21G |
| L7101 | A D 13P |
| L7102 | A D 17P |
| L7105 | A D 20M |
| L7107 | A D 19N |
| L7108 | A D 19M |
| L7109 | A D 10O |
| L7110 | A D 13O |
| L7113 | A D 20O |
| L7114 | A D 20O |
| L7201 | A D 21B |
| **TRANSISTOR** | |
| Q1 | B C 11N |
| Q2 | B C 11K |
| Q3 | B C 12K |
| Q4 | B C 14J |
| Q6 | B C 10J |
| Q7 | B C 15M |
| Q8 | B C 15M |
| Q9 | B C 15M |
| Q10 | B C 16M |
| Q11 | B C 9J |
| Q12 | B C 14K |
| Q13 | B C 10J |
| Q15 | B C 11K |
| Q16 | B C 10J |
| Q17 | B C 11K |
| Q201 | B C 11E |
| Q202 | B C 10F |
| Q203 | B C 9E |
| Q581 | B C 7O |
| Q582 | B C 7P |
| Q583 | B C 8O |
| Q584 | B C 8P |
| Q2001 | B C 9M |
| Q2002 | B C 9L |
| Q2003 | B C 9L |
| Q2051 | B C 9N |
| Q2052 | B C 9K |
| Q2053 | B C 9J |
| Q2054 | B C 9K |
| Q2055 | B C 9L |
| Q2201 | B C 17I |
| Q2202 | B C 18I |
| Q2203 | B C 18J |
| Q2204 | B C 18J |
| Q2251 | B C 15I |
| Q2252 | B C 15J |
| Q2253 | B C 15J |
| Q2254 | B C 15J |
| Q2255 | B C 15J |
| Q3002 | A D 5I |
| Q3003 | A D 19I |
| Q3004 | B C 4E |
| Q3005 | B C 2E |
| Q3007 | B C 14C |
| Q3901 | B C 16B |
| Q4001 | B C 13G |
| Q5101 | A D 2L |
| Q5102 | A D 3M |
| Q5301 | A D 4G |
| Q5303 | A D 1F |
| Q5304 | A D 3G |
| Q5305 | B C 3G |
| Q5306 | B C 4G |
| Q5307 | A D 2E |
| Q5321 | A D 1F |
| Q6030 | B C 21K |
| Q6031 | B C 21K |
| Q6032 | B C 21J |
| Q6701 | B C 20G |
| Q7001 | B C 10A |
| Q7002 | B C 10A |
| Q7003 | B C 10A |
| Q7004 | B C 11A |
| Q7005 | B C 11A |
| Q7006 | B C 11A |
| Q7007 | B C 11A |
| Q7008 | B C 11B |
| Q7009 | B C 12B |
| Q7010 | B C 12B |
| Q7011 | B C 13B |
| Q7012 | B C 13B |
| Q7013 | B C 13B |
| Q7014 | B C 14A |
| Q7016 | B C 12B |
| Q7101 | B C 16P |
| Q7102 | B C 16P |
| Q7103 | B C 17O |
| Q7104 | B C 17P |
| Q7105 | B C 17O |
| Q7106 | B C 19N |
| Q7107 | B C 19O |
| Q7201 | A D 21C |
| **RESISTOR** | |
| R1 | B C 12M |
| R2 | B C 12N |
| R3 | B C 11N |
| R4 | B C 12N |
| R5 | B C 12N |
| R6 | B C 11L |
| R7 | B C 10K |
| R10 | B C 14L |
| R11 | B C 14L |
| R12 | B C 14K |
| R14 | B C 14K |
| R17 | B C 13J |
| R18 | B C 13K |
| R20 | B C 12J |
| R21 | B C 16M |
| R22 | B C 16M |
| R23 | B C 10J |
| R24 | B C 10K |
| R25 | B C 9J |
| R26 | B C 10J |
| R28 | B C 9J |
| R29 | B C 9J |
| R30 | B C 10J |
| R31 | B C 13J |
| R32 | B C 12J |
| R33 | B C 12J |
| R34 | B C 12J |
| R35 | B C 11J |
| R36 | B C 15F |
| R37 | B C 14M |
| R38 | A D 11K |
| R39 | B C 10K |
| R201 | B C 11F |
| R202 | B C 11F |
| R203 | B C 11F |
| R204 | B C 11F |
| R205 | B C 8F |
| R206 | A D 9E |
| R207 | B C 11F |
| R208 | B C 11E |
| R209 | B C 9F |
| R210 | B C 9F |
| R211 | B C 10F |
| R212 | B C 10F |
| R213 | B C 9E |
| R214 | B C 10F |
| R251 | B C 5C |
| R252 | B C 7B |
| R253 | B C 6C |
| R254 | B C 6C |
| R255 | B C 6C |
| R256 | B C 6B |
| R257 | B C 6B |
| R258 | B C 5C |
| R259 | B C 5C |
| R260 | A D 7C |
| R261 | A D 7C |
| R501 | B C 6M |
| R503 | B C 5L |
| R504 | B C 6L |
| R505 | B C 6L |
| R506 | B C 5L |
| R507 | B C 6L |
| R508 | B C 6L |
| R510 | B C 7M |
| R581 | B C 7N |
| R582 | B C 7P |
| R583 | B C 7O |
| R584 | B C 7O |
| R585 | B C 8P |
| R586 | B C 7P |
| R587 | B C 7P |
| R588 | B C 7P |
| R589 | B C 8N |
| R590 | B C 8N |
| R591 | B C 8N |
| R592 | B C 8P |
| R593 | B C 8O |
| R594 | B C 8P |
| R595 | B C 8O |
| R596 | B C 8O |
| R597 | B C 8O |
| R2001 | B C 12N |
| R2002 | B C 12N |
| R2003 | B C 11N |
| R2004 | B C 11N |
| R2005 | A D 12N |
| R2006 | A D 13N |
| R2007 | B C 12N |
| R2008 | B C 13N |
| R2009 | B C 13N |
| R2010 | B C 13N |
| R2011 | A D 13N |
| R2012 | B C 13N |
| R2013 | B C 14N |
| R2014 | B C 14N |
| R2015 | B C 15N |
| R2016 | B C 14N |
| R2017 | B C 14N |
| R2018 | B C 9L |
| R2019 | B C 9L |
| R2021 | B C 15N |
| R2022 | B C 15N |
| R2023 | B C 14M |
| R2024 | A D 13N |
| R2052 | B C 9O |
| R2053 | B C 9O |
| R2054 | B C 9M |
| R2055 | B C 9N |
| R2056 | A D 10N |
| R2057 | B C 9K |
| R2058 | B C 9K |
| R2059 | B C 9K |
| R2060 | B C 9K |
| R2201 | B C 17L |
| R2202 | B C 17L |
| R2203 | B C 17L |
| R2204 | B C 17L |
| R2205 | B C 17L |
| R2206 | B C 17L |
| R2207 | B C 17L |
| R2208 | B C 16L |
| R2209 | B C 18J |
| R2210 | B C 18I |
| R2211 | B C 18I |
| R2212 | B C 18J |
| R2213 | B C 18I |
| R2214 | B C 17J |
| R2215 | A D 17I |
| R2216 | B C 18J |
| R2217 | B C 18J |
| R2218 | B C 18K |
| R2219 | B C 18K |
| R2220 | B C 17I |
| R2221 | B C 17L |
| R2222 | B C 16M |
| R2223 | B C 16M |
| R2224 | B C 16J |
| R2225 | B C 15J |
| R2226 | B C 17L |
| R2227 | B C 18L |
| R2228 | B C 17L |
| R2229 | B C 17L |
| R2230 | B C 18K |
| R2231 | B C 17K |
| R2232 | B C 18K |
| R2233 | B C 17L |
| R2234 | B C 18J |
| R2235 | B C 18K |
| R2236 | B C 18K |
| R2237 | B C 18K |
| R2238 | B C 18K |
| R2239 | B C 15I |
| R2240 | B C 15I |
| R2251 | B C 15K |
| R2252 | B C 15K |
| R2253 | B C 15J |
| R2254 | A D 15I |
| R2255 | B C 16J |
| R2256 | B C 15J |
| R2257 | B C 15K |
| R3024 | B C 9E |
| R3025 | B C 9D |
| R3026 | B C 9D |
| R3027 | A D 7E |
| R3028 | B C 9D |
| R3029 | B C 11E |
| R3030 | A D 9B |
| R3031 | B C 10D |
| R3032 | B C 10D |
| R3033 | B C 10D |
| R3034 | B C 10D |
| R3035 | B C 10D |
| R3037 | B C 11D |
| R3038 | B C 11D |
| R3039 | B C 11D |
| R3040 | B C 11D |
| R3041 | B C 11D |
| R3042 | B C 11D |
| R3043 | B C 11C |
| R3045 | B C 11C |
| R3046 | A D 10C |
| R3047 | A D 11C |
| R3048 | A D 11C |
| R3049 | A D 11C |
| R3050 | A D 11C |
| R3051 | A D 11C |
| R3052 | A D 11C |
| R3053 | A D 12C |
| R3054 | B C 11C |
| R3055 | B C 12C |
| R3058 | A D 12C |
| R3059 | B C 13C |
| R3060 | B C 13C |
| R3061 | B C 13C |
| R3062 | B C 13C |
| R3063 | B C 13C |
| R3064 | B C 13C |
| R3065 | B C 13C |
| R3066 | B C 13C |
| R3067 | B C 13C |
| R3068 | B C 14C |
| R3069 | B C 14C |
| R3070 | A D 15B |
| R3071 | B C 15C |
| R3072 | B C 15C |
| R3073 | B C 15C |
| R3074 | B C 16C |
| R3077 | B C 14D |
| R3080 | B C 13D |
| R3082 | B C 15D |
| R3083 | B C 14E |
| R3084 | A D 16D |
| R3085 | B C 15E |
| R3086 | B C 16D |
| R3087 | B C 16E |
| R3088 | B C 15E |
| R3089 | B C 16E |
| R3090 | B C 15E |
| R3091 | B C 16E |
| R3092 | B C 15E |
| R3093 | B C 16E |
| R3094 | B C 15E |
| R3095 | B C 15E |
| R3096 | B C 14E |
| R3097 | B C 14E |
| R3098 | B C 14E |
| R3099 | B C 13E |
| R3100 | B C 14E |
| R3101 | B C 14E |
| R3102 | B C 15F |
| R3205 | B C 12H |
| R3206 | B C 5H |
| R3207 | B C 19I |
| R3208 | B C 16F |
| R3209 | B C 16F |
| R3210 | B C 9F |
| R3211 | B C 9F |
| R3212 | B C 4E |
| R3213 | B C 4D |
| R3214 | B C 8C |
| R3215 | B C 8C |
| R3216 | B C 8C |
| R3217 | B C 8C |
| R3218 | A D 3E |
| R3219 | B C 3E |
| R3220 | B C 4D |
| R3221 | A D 4D |
| R3222 | B C 3E |
| R3223 | B C 7C |
| R3224 | B C 8C |
| R3225 | B C 18C |
| R3229 | B C 13D |
| R3232 | B C 11E |
| R3234 | A D 15B |
| R3235 | B C 18F |
| R3236 | B C 18F |
| R3237 | B C 10D |
| R3240 | A D 6F |
| R3242 | B C 9E |
| R3244 | B C 17E |
| R3245 | B C 8B |
| R3246 | B C 15D |
| R3248 | B C 15D |
| R3252 | B C 7K |
| R3253 | A D 7K |
| R3254 | B C 6J |
| R3255 | A D 8D |
| R3256 | B C 19C |
| R4001 | A D 15F |
| R4003 | B C 12F |
| R4004 | B C 12F |
| R4005 | B C 13F |
| R4006 | B C 12F |
| R4007 | B C 11F |
| R4009 | B C 13F |
| R4010 | B C 14F |
| R4012 | B C 13F |
| R4013 | B C 13F |
| R4015 | B C 14F |
| R4016 | B C 13F |
| R4017 | B C 15F |
| R4020 | A D 15F |
| R4021 | B C 15F |
| R5101 | A D 4M |
| R5102 | A D 4M |
| R5103 | A D 3M |
| R5104 | A D 1L |
| R5105 | B C 2L |
| R5106 | A D 2L |
| R5107 | A D 3K |
| R5108 | B C 3L |
| R5109 | A D 3M |
| R5110 | B C 3L |
| R5111 | B C 3K |
| R5112 | B C 3K |
| R5302 | B C 5F |
| R5303 | B C 5F |
| R5304 | A D 2H |
| R5306 | B C 1F |
| R5310 | B C 3H |
| R5312 | B C 4H |
| R5313 | B C 3G |
| R5319 | B C 2D |
| R5332 | A D 2F |
| R5333 | A D 3F |
| R6020 | B C 21N |
| R6021 | B C 21N |
| R6030 | B C 21K |
| R6031 | B C 21K |
| R6032 | B C 22L |
| R6033 | B C 21J |
| R6050 | B C 21O |
| R6051 | B C 21O |
| R6052 | B C 21O |
| R6054 | B C 21P |
| R6056 | B C 21P |
| R6080 | B C 21N |
| R6701 | B C 21G |
| R6702 | B C 21G |
| R6703 | B C 21G |
| R6704 | B C 21G |
| R6705 | B C 20G |
| R6706 | B C 20G |
| R6713 | B C 19E |
| R6714 | B C 19F |
| R6715 | B C 19F |
| R6716 | A D 20D |
| R6719 | B C 20F |
| R6720 | A D 20D |
| R6721 | B C 21D |
| R7001 | B C 12A |
| R7002 | B C 12A |
| R7003 | B C 12A |
| R7004 | B C 13A |
| R7005 | B C 13A |
| R7006 | B C 13A |
| R7007 | B C 13A |
| R7008 | B C 12A |
| R7011 | B C 12A |
| R7015 | B C 8A |
| R7020 | B C 17B |
| R7021 | B C 17A |
| R7022 | B C 17B |
| R7023 | B C 7B |
| R7024 | B C 5B |
| R7025 | B C 2B |
| R7026 | B C 3B |
| R7030 | B C 17B |
| R7031 | B C 17A |
| R7032 | B C 6B |
| R7033 | B C 4B |
| R7034 | B C 16B |
| R7035 | B C 3B |
| R7036 | B C 3A |
| R7037 | B C 3A |
| R7101 | B C 16O |
| R7102 | B C 16P |
| R7103 | A D 17P |
| R7105 | B C 13P |
| R7106 | B C 14P |
| R7107 | B C 14P |
| R7108 | B C 11P |
| R7109 | B C 11P |
| R7110 | B C 13P |
| R7111 | B C 13P |
| R7113 | B C 15P |
| R7114 | B C 17Q |
| R7116 | B C 18P |
| R7117 | A D 19P |
| R7119 | B C 18P |
| R7120 | B C 18P |
| R7121 | B C 20P |
| R7122 | B C 20O |
| R7123 | B C 19O |
| R7125 | B C 10P |
| R7126 | B C 9P |
| R7127 | B C 19O |
| R7128 | B C 19O |
| R7131 | B C 19N |
| R7132 | B C 20O |
| R7133 | A D 19O |
| R7134 | B C 19O |
| R7135 | B C 19O |
| R7138 | B C 16P |
| R7139 | A D 18M |
| R7140 | B C 19N |
| R7141 | B C 12P |
| R7144 | B C 17O |
| R7145 | B C 17O |
| R7146 | B C 17O |
| R7147 | B C 17O |
| R7148 | B C 17O |
| R7151 | B C 19P |
| R7152 | B C 19P |
| R7153 | B C 20P |
| R7160 | B C 19B |
| R7161 | B C 19A |
| R7162 | B C 20B |
| R7163 | B C 21B |
| R7167 | B C 18O |
| R7182 | B C 10P |
| R7183 | B C 11P |
| R7184 | B C 12P |
| R7201 | A D 22C |
| R7202 | B C 21C |
| R7203 | B C 22C |
| **OTHER** | |
| BT3001 | A D 3C |
| CP3001 | A D 4F |
| CP3002 | B C 4F |
| CP4001 | A D 4G |
| CP4002 | B C 4G |
| F5001 | A D 2P |
| FC5001 | A D 2P |
| FC5002 | A D 3P |
| FW7106 | A D 4C |
| J7101 | A D 16P |
| J7102 | A D 12P |
| J7103 | A D 21Q |
| J7104 | A D 20Q |
| J7105 | A D 20A |
| J7108 | A D 19O |
| JS3001 | A D 8G |
| JW1 | A D 22B |
| K2001 | B C 14N |
| K2002 | B C 14N |
| K2003 | B C 9O |
| K2004 | B C 9O |
| K2251 | B C 16L |
| K2252 | B C 16L |
| K2253 | B C 15L |
| K5101 | A D 2K |
| K5102 | A D 1N |
| K6701 | B C 21F |
| K6702 | B C 21F |
| K6703 | B C 20F |
| K6704 | B C 20F |
| K6705 | B C 19F |
| K6706 | B C 21D |
| K6707 | B C 22E |
| LF5001 | A D 4P |
| LF5002 | A D 3N |
| PC3001 | A D 15F |
| PC3002 | A D 9F |
| PC04042 | A D 21F |
| PC5101 | A D 4K |
| S3001 | A D 18C |
| S3002 | A D 4E |
| S7001 | A D 22B |
| S7002 | A D 18B |
| S7003 | A D 16B |
| S7004 | A D 7B |
| S7006 | A D 6B |
| S7008 | A D 5B |
| S7010 | A D 4B |
| S7011 | A D 4B |
| S7012 | A D 3B |
| S7013 | A D 2B |
| S7014 | A D 2B |
| S7015 | A D 1B |
| S7016 | A D 17B |
| S7017 | A D 16B |
| S7018 | A D 9B |
| T2051 | A D 9N |
| T5001 | A D 3I |
| TP106 | A D 6P |
| TP111 | A D 5P |
| TP2253 | A D 6P |
| TP2254 | A D 7P |
| TP4001 | A D 6P |
| TP7001 | A D 3A |
| TPGND | A D 4A |
| TU6001 | A D 22P |
| VA5003 | A D 2O |
| VR2251 | A D 20H |
| X1 | A D 14L |
| X2 | A D 14K |
| X201 | A D 9E |
| X3001 | A D 14D |
| X3002 | A D 14D |
| X6701 | A D 21F |

JVC

**VICTOR COMPANY OF JAPAN, LIMITED**
AV & MULTIMEDIA COMPANY VIDEO RECORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.82979)

Printed in Japan
200306WPC

# PARTS LIST

## SAFETY PRECAUTION

**Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.**

### 2. PARTS LIST

### MAIN BOARD ASSEMBLY <03>

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| PW1 | LPA10212-02B | MAIN BOARD ASSY | | V600AA |
| PW1 | LPA10212-04B | MAIN BOARD ASSY | | V600AG |
| IC1 | JCP8060-MSA | IC | | |
| IC2201 | AN3651FBP | IC | | |
| IC3001 | HD6432199RA90F | IC(MCU) | | |
| IC3001 or | HD64F2199RFA90 | IC(MCU) | | |
| IC3002 | IC-PST3427U-X | IC | | |
| IC3002 or | S-80827CNNB-X | IC | | |
| IC3003 | LPN0814-002C-01 | IC(EEPROM) | *(REFER TO BELOW) | V600AA |
| IC3003 | LPN0814-001C-02 | IC(EEPROM) | *(REFER TO BELOW) | V600AG |
| IC6701 | MSP3417D-X | IC | | |
| IC6701 or | MSP3417DG3-X | IC | | |
| IC6701 or | MSP3417G-X | IC | | |
| IC6701 or | MSP3417GQGB8V3X | IC | | |
| IC7002 | GP1UM291QK | IR DETECT UNIT | 38kHz | |
| Q7 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q7 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q7 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q8 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q8 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q8 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q9 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q9 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q9 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q10 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q10 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q10 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q12 | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q12 or | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q12 or | 2PA1576/R/-X | TRANSISTOR | | |
| Q2001 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2001 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2001 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2002 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2002 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2002 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2003 | DTA144WUA-X | DIGI TRANSISTOR | | |
| Q2003 or | UN511E-X | DIGI TRANSISTOR | | |
| Q2003 or | RN2309-X | DIGI TRANSISTOR | | |
| Q2003 or | PDTA144WU-X | DIGI TRANSISTOR | | |
| Q2051 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2051 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2051 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2052 | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q2052 or | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q2052 or | 2PA1576/R/-X | TRANSISTOR | | |
| Q2053 | DTC144WUA-X | DIGI TRANSISTOR | | |
| Q2053 or | UN521E-X | DIGI TRANSISTOR | | |
| Q2053 or | RN1309-X | DIGI TRANSISTOR | | |
| Q2053 or | PDTC144WU-X | DIGI TRANSISTOR | | |
| Q2054 | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q2054 or | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q2054 or | 2PA1576/R/-X | TRANSISTOR | | |
| Q2055 | DTC144WUA-X | DIGI TRANSISTOR | | |
| Q2055 or | UN521E-X | DIGI TRANSISTOR | | |
| Q2055 or | RN1309-X | DIGI TRANSISTOR | | |
| Q2055 or | PDTC144WU-X | DIGI TRANSISTOR | | |
| Q2201 | DTA144WUA-X | DIGI TRANSISTOR | | |
| Q2201 or | PDTA144WU-X | DIGI TRANSISTOR | | |
| Q2201 or | UN511E-X | DIGI TRANSISTOR | | |
| Q2201 or | RN2309-X | DIGI TRANSISTOR | | |
| Q2202 | DTC144WUA-X | DIGI TRANSISTOR | | |
| Q2202 or | PDTC144WU-X | DIGI TRANSISTOR | | |
| Q2202 or | UN521E-X | DIGI TRANSISTOR | | |
| Q2202 or | RN1309-X | DIGI TRANSISTOR | | |
| Q2203 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2203 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2203 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2204 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2204 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2204 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2255 | DTC114EUA-X | DIGI TRANSISTOR | | |
| Q2255 or | PDTC114EU-X | DIGI TRANSISTOR | | |
| Q2255 or | UN5211-X | DIGI TRANSISTOR | | |
| Q2255 or | RN1302-X | DIGI TRANSISTOR | | |
| Q3003 | PTZ-NV16A | IC(PHOTO SENSOR) | | |
| Q3004 | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q3004 or | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q3004 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q3005 | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q3005 or | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q3005 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q4001 | UN5211-X | DIGI TRANSISTOR | | |
| Q4001 or | DTC114EUA-X | DIGI TRANSISTOR | | |
| Q4001 or | PDTC114EU-X | DIGI TRANSISTOR | | |
| Q4001 or | RN1302-X | DIGI TRANSISTOR | | |
| Q5101 | 2SK2632-CB14 | POWER MOS FET | | |
| Q5101 or | 2SK2129-LT | POWER MOS FET | | |
| Q5101 or | 2SK2632 | POWER MOS FET | | |
| Q5101 or | 2SK2129 | POWER MOS FET | | |
| Q5102 | 2SD2144S/UV/-T | TRANSISTOR | | |
| Q5301 | 2SC1740S/RS/-T | TRANSISTOR | | |
| Q5301 or | 2SC3199/YG/-T | TRANSISTOR | | |
| ⚠ Q5304 | 2SD2144S/UV/-T | TRANSISTOR | | |
| Q5305 | DTA114EUA-X | DIGI TRANSISTOR | | |
| Q5305 or | UN5111-X | DIGI TRANSISTOR | | |
| Q5305 or | RN2302-X | DIGI TRANSISTOR | | |
| Q5305 or | PDTA114EU-X | DIGI TRANSISTOR | | |
| Q5306 | DTC114EUA-X | DIGI TRANSISTOR | | |
| Q5306 or | UN5211-X | DIGI TRANSISTOR | | |
| Q5306 or | RN1302-X | DIGI TRANSISTOR | | |
| Q5306 or | PDTC114EU-X | DIGI TRANSISTOR | | |
| Q5307 | 2SD2144S/UV/-T | TRANSISTOR | | |
| ⚠ Q5321 | 2SD1858/QR/-T | TRANSISTOR | | |
| Q6030 | 2SB1218A/RS/-X | TRANSISTOR | | |
| Q6031 | DTC114EUA-X | DIGI TRANSISTOR | | V600AA |
| Q6031 or | UN5211-X | DIGI TRANSISTOR | | V600AA |
| Q6031 or | RN1302-X | DIGI TRANSISTOR | | V600AA |
| Q6031 or | PDTC114EU-X | DIGI TRANSISTOR | | V600AA |
| Q6032 | DTC114EUA-X | DIGI TRANSISTOR | | V600AA |
| Q6032 or | UN5211-X | DIGI TRANSISTOR | | V600AA |
| Q6032 or | RN1302-X | DIGI TRANSISTOR | | V600AA |
| Q6032 or | PDTC114EU-X | DIGI TRANSISTOR | | V600AA |
| Q6701 | 2SC3936/BC/-X | TRANSISTOR | | V600AG |
| Q7001 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7002 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7003 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7004 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7005 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7008 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7008 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7009 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7009 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7010 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7010 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7011 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7011 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7012 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7012 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7013 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7013 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7014 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7014 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7106 | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q7106 or | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q7106 or | 2PA1576/R/-X | TRANSISTOR | | |

*The VCR goes to jig RCU mode after replacing the EEPROM and the VCR does not accept some RCU command.
Therefore please set the VCR to the user RCU mode after replacing the EEPROM.
The method of setting the VCR to the user RCU mode is written on the service manual.

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| D201 | 1SS133-T2 | DIODE | | |
| D2001 | 1SS133-T2 | DIODE | | |
| D2001 | or 1SS270A-T2 | SI DIODE | | |
| D2251 | 1SS133-T2 | DIODE | | |
| D2251 | or 1SS270A-T2 | SI DIODE | | |
| D3001 | LNB2301L01VI | LED | | |
| D3002 | 1SS133-T2 | DIODE | | |
| D3002 | or 1SS270A-T2 | SI DIODE | | |
| D3003 | RD39ES/B3/-T2 | Z DIODE | | |
| D3003 | or MTZJ39C-T2 | Z DIODE | | |
| D3004 | 11ES2-T2 | SI DIODE | | |
| D3004 | or 1A3G-T2 | SI DIODE | | |
| ⚠ D3005 | 11ES2-T2 | SI DIODE | | |
| ⚠ D3005 | or 1A3G-T2 | SI DIODE | | |
| ⚠ D3007 | RB721Q-40-T2 | DIODE | | |
| D5001 | S1WB/A/60-4102 | BRIDGE DIODE | | |
| D5001 | or S1WB/A/60-X | BRIDGE DIODE | | |
| D5001 | or S1WB(A)60F4072X | BRIDGE DIODE | | |
| D5101 | AU01-T2 | SI DIODE | | |
| D5101 | or 1SR153-400-T2 | FR DIODE | | |
| D5101 | or ERA18-04-T2 | FR DIODE | | |
| D5101 | or 10ELS4-T2 | FR DIODE | | |
| D5102 | AU01-T2 | SI DIODE | | |
| D5102 | or 1SR153-400-T2 | FR DIODE | | |
| D5102 | or ERA18-04-T2 | FR DIODE | | |
| D5102 | or 10ELS4-T2 | FR DIODE | | |
| D5103 | 1SS133-T2 | DIODE | | |
| D5103 | or 1SS270A-T2 | SI DIODE | | |
| D5105 | 1SS133-T2 | DIODE | | |
| D5105 | or 1SS270A-T2 | SI DIODE | | |
| D5203 | AU01Z-T2 | FR DIODE | | |
| D5203 | or 10ELS2-T2 | FR DIODE | | |
| D5204 | AU01Z-T2 | FR DIODE | | |
| D5204 | or 10ELS2-T2 | FR DIODE | | |
| ⚠ D5207 | AK04-T2 | SB DIODE | | |
| ⚠ D5207 | or 11EQS04-T2 | SB DIODE | | |
| ⚠ D5207 | or 1S4-T2 | SB DIODE | | |
| ⚠ D5207 | or SBO40-T2 | SB DIODE | | |
| ⚠ D5209 | AK04-T2 | SB DIODE | | |
| ⚠ D5209 | or 11EQS04-T2 | SB DIODE | | |
| ⚠ D5209 | or 1S4-T2 | SB DIODE | | |
| ⚠ D5209 | or SBO40-T2 | SB DIODE | | |
| D5210 | AU01Z-T2 | FR DIODE | | |
| D5210 | or ERA18-02-T2 | FR DIODE | | |
| D5210 | or 1SR153-400-T2 | FR DIODE | | |
| D5210 | or 10ELS2-T2 | FR DIODE | | |
| D5210 | or PG104RS-T2 | FR DIODE | | |
| D5301 | MTZJ15C-T2 | Z DIODE | | |
| D5301 | or RD15ES/B3/-T2 | Z DIODE | | |
| D5302 | MTZJ11C-T2 | Z DIODE | | |
| D5302 | or RD11ES/B3/-T2 | Z DIODE | | |
| D5303 | MTZJ5.6A-T2 | Z DIODE | | |
| D5303 | or RD5.6ES/B1/-T2 | Z DIODE | | |
| D5305 | MTZJ5.6C-T2 | Z DIODE | | |
| D5305 | or RD5.6ES/B3/-T2 | Z DIODE | | |
| D6002 | HZ30-2L-T2 | Z DIODE | | |
| D6002 | or HZ30-2LTD | Z DIODE | | |
| D6701 | 1SS133-T2 | DIODE | | |
| D6701 | or 1SS270A-T2 | SI DIODE | | |
| PC3001 | RPI-304J | IC(PHOTO SENSOR) | | |
| PC3002 | RPI-304J | IC(PHOTO SENSOR) | | |
| ⚠ PC5101 | PC123Y22 | PHOTO COUPLER | | |
| C1 | NDC21HJ-151X | C CAPACITOR | 150pF 50V J | |
| C2 | NDC21HJ-470X | C CAPACITOR | 47pF 50V J | |
| C4 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C5 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C6 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C7 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C8 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C9 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C10 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C11 | QEPF1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C13 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C14 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C15 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| C17 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C19 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C20 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C22 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C24 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C25 | QEKJ1HM-335Z | E CAPACITOR | 3.3uF 50V M | |
| C26 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C27 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C30 | NCB21HK-331X | C CAPACITOR | 330pF 50V K | |
| C31 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C32 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C33 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C34 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C35 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C36 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C37 | NDC21HJ-4R0X | C CAPACITOR | 4pF 50V J | |
| C38 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C39 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C40 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C41 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C43 | QEKJ1HM-335Z | E CAPACITOR | 3.3uF 50V M | |
| C44 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C45 | NCB21HK-472X | C CAPACITOR | 4700pF 50V K | |
| C46 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C47 | QEKJ1HM-474Z | E CAPACITOR | 0.47uF 50V M | |
| C48 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C49 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C55 | NDC21HJ-151X | C CAPACITOR | 150pF 50V J | |
| C56 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C57 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C58 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C59 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C60 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C61 | QEKC0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C62 | QCBB1HK-103Y | C CAPACITOR | 0.01uF 50V K | |
| C63 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C64 | QCBB1HK-103Y | C CAPACITOR | 0.01uF 50V K | |
| C71 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C201 | NDC21HJ-220X | C CAPACITOR | 22pF 50V J | |
| C202 | QERF1EM-475Z | E CAPACITOR | 4.7uF 25V M | |
| C203 | NCB21HK-102X | C CAPACITOR | 1000pF 50V K | |
| C204 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C205 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C207 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C209 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C210 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C212 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C213 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2001 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2002 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C2003 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C2005 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2006 | NCB21HK-682X | C CAPACITOR | 6800pF 50V K | |
| C2007 | QEKJ1CM-226Z | E CAPACITOR | 22uF 16V M | |
| C2008 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2009 | NCB21HK-122X | C CAPACITOR | 1200pF 50V K | |
| C2010 | NCB21HK-152X | C CAPACITOR | 1500pF 50V K | |
| C2011 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2012 | QEKC1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2051 | NCB21HK-331X | C CAPACITOR | 330pF 50V K | |
| C2052 | QFLC1HJ-823Z | M CAPACITOR | 0.082uF 50V J | |
| C2053 | NCB21HK-472X | C CAPACITOR | 4700pF 50V K | |
| C2054 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C2055 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2201 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2202 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2203 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2204 | QEKJ0JM-336Z | E CAPACITOR | 33uF 6.3V M | |
| C2205 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2206 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2207 | NCB21HK-153X | C CAPACITOR | 0.015uF 50V K | |
| C2208 | NCB21HK-153X | C CAPACITOR | 0.015uF 50V K | |
| C2209 | QERF1CM-106Z | E CAPACITOR | 10uF 16V M | |
| C2210 | QERF1CM-106Z | E CAPACITOR | 10uF 16V M | |
| C2211 | QEKJ0JM-336Z | E CAPACITOR | 33uF 6.3V M | |
| C2212 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C2214 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2215 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| C2216 | QEKJ1CM-476Z | E CAPACITOR | 47uF 16V M | |
| C2218 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2219 | QEKJ1CM-226Z | E CAPACITOR | 22uF 16V M | |
| C2220 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2221 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C2222 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2223 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C2224 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C2227 | QERF1CM-106Z | E CAPACITOR | 10uF 16V M | |
| C2232 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C2233 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C2251 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2252 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2253 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2254 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C2255 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2256 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2257 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2258 | NDC21HJ-181X | C CAPACITOR | 180pF 50V J | |
| C2259 | QEKJ1HM-334Z | E CAPACITOR | 0.33uF 50V M | |
| C3004 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3011 | QETN0JM-108Z | E CAPACITOR | 1000uF 6.3V M | |
| C3012 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C3013 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3014 | QERF0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C3016 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3022 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3024 | NDC21HJ-120X | C CAPACITOR | 12pF 50V J | |
| C3025 | QAT3725-300Z | TRIM CAPACITOR | 30pF,TIMER CLOCK | |
| C3030 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C3031 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3033 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3036 | NDC21HJ-180X | C CAPACITOR | 18pF 50V J | |
| C3037 | NDC21HJ-120X | C CAPACITOR | 12pF 50V J | |
| C3045 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3047 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3048 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3050 | NCF21EZ-104X | C CAPACITOR | 0.1uF 25V Z | |
| C3051 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | V600AA |
| C3052 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C3053 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C3056 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C3057 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3071 | QEKJ1CM-336Z | E CAPACITOR | 33uF 16V M | |
| C3072 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C4002 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C4003 | NCB21HK-102X | C CAPACITOR | 1000pF 50V K | |
| C4004 | QERF1CM-226Z | E CAPACITOR | 22uF 16V M | |
| C4005 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C4006 | QERF0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C4008 | QEQF1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C4009 | NCB21HK-563X | C CAPACITOR | 0.056uF 50V K | |
| C4010 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C4011 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C4012 | QERF1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C4014 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C4015 | NCB21HK-102X | C CAPACITOR | 1000pF 50V K | |
| C4016 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C4031 | QEKJ1CM-336Z | E CAPACITOR | 33uF 16V M | |
| ⚠ C5001 | QFZ9072-473 | MM CAPACITOR | 0.047uF AC250V K | |
| ⚠ C5004 | QCZ9071-222 | C CAPACITOR | 2200pF AC400V M | |
| C5006 | QEZ0375-686 | E CAPACITOR | 68uF 400V M | |
| C5101 | QCZ0212-472 | C CAPACITOR | 4700pF 1kV K | |
| C5102 | QCZ0339-101Z | C CAPACITOR | 100pF 1kV K | |
| C5104 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C5105 | QFN31HJ-183Z | M CAPACITOR | 0.018uF 50V J | |
| C5106 | QCBB1HJ-271Y | C CAPACITOR | 270pF 50V J | |
| C5107 | QFV91HJ-104Z | MF CAPACITOR | 0.1uF 50V J | |
| C5202 | QETN1CM-108Z | E CAPACITOR | 1000uF 16V M | |
| C5203 | QEMT1AM-128 | E CAPACITOR | 1200uF 10V M | |
| C5204 | QETJ2AM-475Z | E CAPACITOR | 4.7uF 100V M | |
| C5206 | QEKJ1CM-476Z | E CAPACITOR | 47uF 16V M | |
| C5207 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |
| C5301 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |
| C5303 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |
| C5305 | QFVF1HJ-274Z | MF CAPACITOR | 0.27uF 50V J | |
| C5307 | QEKJ1CM-476Z | E CAPACITOR | 47uF 16V M | |
| C5308 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| C6006 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6008 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6013 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6014 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6016 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6032 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C6037 | QEKJ1HM-106Z | E CAPACITOR | 10uF 50V M | |
| C6501 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C6502 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6701 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | V600AG |
| C6703 | NDC21HJ-181X | C CAPACITOR | 180pF 50V J | V600AG |
| C6704 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6707 | NDC21HJ-470X | C CAPACITOR | 47pF 50V J | |
| C6708 | NDC21HJ-8R0X | C CAPACITOR | 8pF 50V J | |
| C6709 | NDC21HJ-2R0X | C CAPACITOR | 2pF 50V J | |
| C6713 | NCF21CZ-224X | C CAPACITOR | 0.22uF 16V Z | |
| C6714 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C6715 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C6716 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C6717 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C6719 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C6720 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C6721 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6723 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C7011 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C7114 | QETN0JM-477Z | E CAPACITOR | 470uF 6.3V M | |
| C7119 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7120 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7128 | QEKJ0JM-107Z | E CAPACITOR | 100uF 6.3V M | |
| C7133 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C7164 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7165 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7197 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| R1 | NRSA02J-622X | MG RESISTOR | 6.2kΩ 1/10W J | |
| R2 | NRSA02J-152X | MG RESISTOR | 1.5kΩ 1/10W J | |
| R3 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R11 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R12 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R21 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R22 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R31 | NRSA02J-471X | MG RESISTOR | 470Ω 1/10W J | |
| R36 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R37 | NRSA02J-153X | MG RESISTOR | 15kΩ 1/10W J | |
| R201 | NRSA02J-471X | MG RESISTOR | 470Ω 1/10W J | |
| R202 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R203 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R204 | NRSA02J-474X | MG RESISTOR | 470kΩ 1/10W J | |
| R205 | NRSA02J-301X | MG RESISTOR | 300Ω 1/10W J | |
| R208 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R209 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R210 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R214 | NRSA02J-474X | MG RESISTOR | 470kΩ 1/10W J | |
| R2003 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R2005 | QRE141J-153Y | C RESISTOR | 15kΩ 1/4W J | |
| R2007 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2008 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R2010 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R2013 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R2014 | NRSA02J-394X | MG RESISTOR | 390kΩ 1/10W J | |
| R2015 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R2016 | NRSA02J-393X | MG RESISTOR | 39kΩ 1/10W J | |
| R2017 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2018 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2019 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2021 | NRSA02J-333X | MG RESISTOR | 33kΩ 1/10W J | |
| R2022 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R2023 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R2024 | QRE141J-103Y | C RESISTOR | 10kΩ 1/4W J | |
| R2053 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2054 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R2055 | NRSA02J-3R3X | MG RESISTOR | 3.3Ω 1/10W J | |
| R2056 | QRE141J-820Y | C RESISTOR | 82Ω 1/4W J | |
| R2057 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2058 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2059 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2060 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2201 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| R2202 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2203 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2204 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2205 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2206 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2207 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2208 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2209 | NRSA02J-681X | MG RESISTOR | 680Ω 1/10W J | |
| R2210 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2211 | NRSA02J-272X | MG RESISTOR | 2.7kΩ 1/10W J | |
| R2212 | NRSA02J-272X | MG RESISTOR | 2.7kΩ 1/10W J | |
| R2213 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2214 | NRSA02J-681X | MG RESISTOR | 680Ω 1/10W J | |
| R2215 | QRE141J-181Y | C RESISTOR | 180Ω 1/4W J | |
| R2216 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R2217 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2218 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R2219 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R2220 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R2222 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2223 | NRSA02J-511X | MG RESISTOR | 510Ω 1/10W J | |
| R2224 | NRSA02J-511X | MG RESISTOR | 510Ω 1/10W J | |
| R2225 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2226 | NRSA02J-273X | MG RESISTOR | 27kΩ 1/10W J | |
| R2227 | NRSA02J-393X | MG RESISTOR | 39kΩ 1/10W J | |
| R2228 | NRSA02J-273X | MG RESISTOR | 27kΩ 1/10W J | |
| R2229 | NRSA02J-393X | MG RESISTOR | 39kΩ 1/10W J | |
| R2230 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2231 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2232 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2233 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2234 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R2251 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2252 | NRSA02J-221X | MG RESISTOR | 220Ω 1/10W J | |
| R2253 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R2255 | NRSA02J-273X | MG RESISTOR | 27kΩ 1/10W J | |
| R3024 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3025 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3028 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3030 | QRE121J-102Y | C RESISTOR | 1kΩ 1/2W J | |
| R3031 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3033 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3034 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3035 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3038 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3039 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3054 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3059 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3060 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3061 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3062 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3063 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3064 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3065 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3066 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3067 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3069 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3072 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3073 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3074 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3077 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3080 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R3082 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3085 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3088 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3091 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3092 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3098 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | V600AA |
| R3102 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3205 | NRSA02J-181X | MG RESISTOR | 180Ω 1/10W J | |
| R3207 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R3208 | NRSA02J-121X | MG RESISTOR | 120Ω 1/10W J | |
| R3209 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R3210 | NRSA02J-121X | MG RESISTOR | 120Ω 1/10W J | |
| R3211 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R3212 | NRSA02J-474X | MG RESISTOR | 470kΩ 1/10W J | |
| R3213 | NRSA02J-334X | MG RESISTOR | 330kΩ 1/10W J | |
| R3214 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3215 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3216 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3217 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3218 | QRE141J-472Y | C RESISTOR | 4.7kΩ 1/4W J | |
| R3219 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3220 | NRSA02J-104X | MG RESISTOR | 100kΩ 1/10W J | |
| R3222 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3223 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3224 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3225 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3229 | NRSA02J-105X | MG RESISTOR | 1MΩ 1/10W J | |
| R3235 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3236 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3246 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3248 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3253 | QRE141J-103Y | C RESISTOR | 10kΩ 1/4W J | |
| ⚠ R3256 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R4003 | NRSA02J-561X | MG RESISTOR | 560Ω 1/10W J | |
| R4004 | NRSA02J-561X | MG RESISTOR | 560Ω 1/10W J | |
| R4005 | NRSA02J-562X | MG RESISTOR | 5.6kΩ 1/10W J | |
| R4007 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R4009 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R4012 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R4015 | NRSA02J-562X | MG RESISTOR | 5.6kΩ 1/10W J | |
| R4017 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5101 | QRE141J-224Y | C RESISTOR | 220kΩ 1/4W J | |
| R5102 | QRE141J-224Y | C RESISTOR | 220kΩ 1/4W J | |
| R5103 | QRE141J-683Y | C RESISTOR | 68kΩ 1/4W J | |
| R5104 | QRG02GJ-683 | OMF RESISTOR | 68kΩ 2W J | |
| R5106 | QRT01DJ-R39X | MF RESISTOR | 0.39Ω 1W J | |
| R5107 | QRE121J-331Y | C RESISTOR | 330Ω 1/2W J | |
| R5108 | NRSA02J-152X | MG RESISTOR | 1.5kΩ 1/10W J | |
| R5109 | QRE141J-561Y | C RESISTOR | 560Ω 1/4W J | |
| R5110 | NRSA02J-224X | MG RESISTOR | 220kΩ 1/10W J | |
| R5111 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5112 | NRSA02J-221X | MG RESISTOR | 220Ω 1/10W J | |
| R5302 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5303 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R5304 | QRE141J-471Y | C RESISTOR | 470Ω 1/4W J | |
| R5306 | NRSA02J-181X | MG RESISTOR | 180Ω 1/10W J | |
| R5310 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R5312 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5313 | NRSA02J-821X | MG RESISTOR | 820Ω 1/10W J | |
| R5319 | NRSA02J-221X | MG RESISTOR | 220Ω 1/10W J | |
| R5332 | QRL02DJ-391X | OMF RESISTOR | 390Ω 2W J | |
| R6020 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6021 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6030 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6031 | NRSA02J-271X | MG RESISTOR | 270Ω 1/10W J | |
| R6032 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R6033 | NRSA02J-182X | MG RESISTOR | 1.8kΩ 1/10W J | |
| R6050 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6051 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6052 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6056 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6080 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6701 | NRSA02J-392X | MG RESISTOR | 3.9kΩ 1/10W J | V600AG |
| R6702 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | V600AG |
| R6703 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | V600AG |
| R6704 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | V600AG |
| R6705 | NRSA02J-271X | MG RESISTOR | 270Ω 1/10W J | V600AG |
| R6707 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R6708 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R6709 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6710 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R6711 | QRE141J-104Y | C RESISTOR | 100kΩ 1/4W J | |
| R6712 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6713 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R6714 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6715 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R6716 | QRE141J-470Y | C RESISTOR | 47Ω 1/4W J | |
| R6719 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R6720 | QRE141J-562Y | C RESISTOR | 5.6kΩ 1/4W J | |
| R6721 | NRSA02J-562X | MG RESISTOR | 5.6kΩ 1/10W J | |
| R7002 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7003 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7004 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7005 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| R7006 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7007 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7008 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7015 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R7020 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R7021 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R7022 | NRSA02J-182X | MG RESISTOR | 1.8kΩ 1/10W J | |
| R7023 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R7024 | NRSA02J-272X | MG RESISTOR | 2.7kΩ 1/10W J | |
| R7025 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R7026 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R7030 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R7031 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R7032 | NRSA02J-182X | MG RESISTOR | 1.8kΩ 1/10W J | |
| R7033 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R7121 | NRSA02J-750X | MG RESISTOR | 75Ω 1/10W J | |
| R7122 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7123 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7131 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R7132 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7133 | QRE141J-331Y | C RESISTOR | 330Ω 1/4W J | |
| R7134 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7151 | NRSA02J-750X | MG RESISTOR | 75Ω 1/10W J | |
| R7152 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7153 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7160 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7161 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R7162 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7163 | NRSA02J-750X | MG RESISTOR | 75Ω 1/10W J | |
| | | | | |
| L3 | QQL29BJ-100Z | P COIL | 10uH J | |
| L5 | QQL29BJ-100Z | P COIL | 10uH J | |
| L6 | QQL29BJ-100Z | P COIL | 10uH J | |
| L7 | QQR0967-001 | CHOKE COIL | | |
| L10 | QQL29BJ-100Z | P COIL | 10uH J | |
| L201 | QQL071J-150Y | COIL | 15uH J | |
| L203 | QQL071J-270Y | COIL | 27uH J | |
| L2251 | QQL29BJ-100Z | P COIL | 10uH J | |
| L2252 | QQL29BJ-151Z | P COIL | 150uH J | |
| L3001 | QQL231J-100Y | COIL | 10uH J | |
| L5201 | PELN1184 | CHOKE COIL | | |
| L5202 | PELN1184 | CHOKE COIL | | |
| L6001 | QQL29BK-1R0Z | P COIL | 1uH K | |
| L6002 | QQL29BK-1R0Z | P COIL | 1uH K | |
| L6501 | QQL29BK-1R0Z | P COIL | 1uH K | |
| L6702 | QQL231J-3R3Y | COIL | 3.3uH J | V600AG |
| L7107 | QQL29BJ-100Z | P COIL | 10uH J | |
| T2051 | PELN0832 | OSC TRANS | | |
| ⚠ T5001 | QQS0186-001 | SW TRANSF | | |
| | | | | |
| B1 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B201 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B2003 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B3003 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B6051 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B6701 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | V600AA |
| B7102 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B7108 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B7113 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B7114 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| CN1 | QGF1201C2-09 | CONNECTOR | FFC/FPC (1-9) | |
| CN2001 | QGF1207C1-06 | CONNECTOR | FFC/FPC (1-6) | |
| CN2002 | QGB2532J1-02 | CONNECTOR | B-B (1-2) | |
| CN3001 | QGB2032M4-12 | CONNECTOR | B-B (1-12) | |
| ⚠ CN5001 | QGA7901C3-02 | CONNECTOR | W-B (1-2) | |
| ⚠ CP3002 | NMFZ012-1R0X-M | FUSE | 1A | |
| ⚠ CP4002 | NMFZ012-1R0X-M | FUSE | 1A | |
| DI7001 | LTG-Y2K16M-02J | LED | | |
| ET1 | PQ21623-2-5 | EARTH PLATE(RF) | | |
| ⚠ F5001 | QMF51E2-2R0-J1 | FUSE | 2A AC250V | |
| FC5001 | QNG0006-001Z | FUSE CLIP | | |
| FC5002 | QNG0006-001Z | FUSE CLIP | | |
| FW7106 | QUM022-30A4A4 | PARA RIBON WIRE | | |
| HS1 | LP40090-001A | HEAT SINK | Q5101 | |
| J7103 | QNN0552-001 | PIN JACK | REAR A/V OUT | |
| J7104 | QNN0552-001 | PIN JACK | REAR A/V IN | |
| J7105 | QNN0381-002 | PIN JACK | FRONT A/V IN | |
| JS3001 | QSW0954-002 | ROTARY ENCODER | | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| K5101 | QQR0678-001Z | FERRITE BEADS | | |
| K6701 | NQR0200-003X | FERRITE BEADS | | |
| K6702 | NQR0200-003X | FERRITE BEADS | | |
| K6703 | NQR0200-003X | FERRITE BEADS | | |
| K6704 | NQR0200-003X | FERRITE BEADS | | |
| K6705 | NQR0200-003X | FERRITE BEADS | | |
| K6706 | NQR0200-003X | FERRITE BEADS | | |
| ⚠ LF5002 | QQR0978-001 | LINE FILTER | | |
| OT1 | QYTDST3006Z | TAP SCREW | 3mm x 6mm,Q5101 | |
| S3001 | QSW0602-004 | PUSH SWITCH | REC.SAFETY | |
| S7002 | QSW0456-002Z | TACT SWITCH | POWER | |
| S7003 | QSW0456-002Z | TACT SWITCH | PR - | |
| S7004 | QSW0456-002Z | TACT SWITCH | REW | |
| S7006 | QSW0456-002Z | TACT SWITCH | FWD | |
| S7010 | QSW0456-002Z | TACT SWITCH | REC | |
| S7011 | QSW0456-002Z | TACT SWITCH | PAUSE | |
| S7013 | QSW0456-002Z | TACT SWITCH | STOP/EJECT | |
| S7015 | QSW0456-002Z | TACT SWITCH | PLAY | |
| S7017 | QSW0456-002Z | TACT SWITCH | PR + | |
| SD1 | LP21105-002A | SHIELD CASE | | |
| ⚠ TB1 | LP20316-010A | TERMINAL BOARD | | |
| TU6001 | QAU0261-002 | TUNER | | |
| W1 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W2 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W4 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W5 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W6 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W7 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W8 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W9 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W11 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W13 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W15 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W17 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W19 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W20 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W21 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W24 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W25 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W26 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W27 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W28 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W30 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W32 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W33 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W34 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| X1 | QAX0740-001 | CRYSTAL | 4.433619MHz | |
| X2 | QAX0739-001 | CRYSTAL | 3.57MHz | |
| X3001 | QAX0445-001 | CRYSTAL | 32.768kHz | |
| X3002 | QAX0527-001 | CRYSTAL | 10.000000MHz | |
| X6701 | QAX0443-001 | CRYSTAL | 18.432MHz | |

# PARTS LIST

## SAFETY PRECAUTION

**Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.**

### 2. PARTS LIST

### MAIN BOARD ASSEMBLY <03>

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| PW1 | LPA10212-02B | MAIN BOARD ASSY | | V600AA |
| PW1 | LPA10212-04B | MAIN BOARD ASSY | | V600AG |
| IC1 | JCP8060-MSA | IC | | |
| IC2201 | AN3651FBP | IC | | |
| IC3001 | HD6432199RA90F | IC(MCU) | | |
| IC3001 or | HD64F2199RFA90 | IC(MCU) | | |
| IC3002 | IC-PST3427U-X | IC | | |
| IC3002 or | S-80827CNNB-X | IC | | |
| IC3003 | LPN0814-002C-01 | IC(EEPROM) | *(REFER TO BELOW) | V600AA |
| IC3003 | LPN0814-001C-02 | IC(EEPROM) | *(REFER TO BELOW) | V600AG |
| IC6701 | MSP3417D-X | IC | | |
| IC6701 or | MSP3417DG3-X | IC | | |
| IC6701 or | MSP3417G-X | IC | | |
| IC6701 or | MSP3417GQGB8V3X | IC | | |
| IC7002 | GP1UM291QK | IR DETECT UNIT | 38kHz | |
| Q7 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q7 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q7 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q8 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q8 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q8 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q9 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q9 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q9 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q10 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q10 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q10 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q12 | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q12 or | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q12 or | 2PA1576/R/-X | TRANSISTOR | | |
| Q2001 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2001 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2001 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2002 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2002 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2002 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2003 | DTA144WUA-X | DIGI TRANSISTOR | | |
| Q2003 or | UN511E-X | DIGI TRANSISTOR | | |
| Q2003 or | RN2309-X | DIGI TRANSISTOR | | |
| Q2003 or | PDTA144WU-X | DIGI TRANSISTOR | | |
| Q2051 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2051 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2051 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2052 | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q2052 or | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q2052 or | 2PA1576/R/-X | TRANSISTOR | | |
| Q2053 | DTC144WUA-X | DIGI TRANSISTOR | | |
| Q2053 or | UN521E-X | DIGI TRANSISTOR | | |
| Q2053 or | RN1309-X | DIGI TRANSISTOR | | |
| Q2053 or | PDTC144WU-X | DIGI TRANSISTOR | | |
| Q2054 | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q2054 or | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q2054 or | 2PA1576/R/-X | TRANSISTOR | | |
| Q2055 | DTC144WUA-X | DIGI TRANSISTOR | | |
| Q2055 or | UN521E-X | DIGI TRANSISTOR | | |
| Q2055 or | RN1309-X | DIGI TRANSISTOR | | |
| Q2055 or | PDTC144WU-X | DIGI TRANSISTOR | | |
| Q2201 | DTA144WUA-X | DIGI TRANSISTOR | | |
| Q2201 or | PDTA144WU-X | DIGI TRANSISTOR | | |
| Q2201 or | UN511E-X | DIGI TRANSISTOR | | |
| Q2201 or | RN2309-X | DIGI TRANSISTOR | | |
| Q2202 | DTC144WUA-X | DIGI TRANSISTOR | | |
| Q2202 or | PDTC144WU-X | DIGI TRANSISTOR | | |
| Q2202 or | UN521E-X | DIGI TRANSISTOR | | |
| Q2202 or | RN1309-X | DIGI TRANSISTOR | | |
| Q2203 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2203 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2203 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2204 | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q2204 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q2204 or | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q2255 | DTC114EUA-X | DIGI TRANSISTOR | | |
| Q2255 or | PDTC114EU-X | DIGI TRANSISTOR | | |
| Q2255 or | UN5211-X | DIGI TRANSISTOR | | |
| Q2255 or | RN1302-X | DIGI TRANSISTOR | | |
| Q3003 | PTZ-NV16A | IC(PHOTO SENSOR) | | |
| Q3004 | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q3004 or | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q3004 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q3005 | 2SD1819A/QRS/-X | TRANSISTOR | | |
| Q3005 or | 2SC4081/QRS/-X | TRANSISTOR | | |
| Q3005 or | 2PC4081/R/-X | TRANSISTOR | | |
| Q4001 | UN5211-X | DIGI TRANSISTOR | | |
| Q4001 or | DTC114EUA-X | DIGI TRANSISTOR | | |
| Q4001 or | PDTC114EU-X | DIGI TRANSISTOR | | |
| Q4001 or | RN1302-X | DIGI TRANSISTOR | | |
| Q5101 | 2SK2632-CB14 | POWER MOS FET | | |
| Q5101 or | 2SK2129-LT | POWER MOS FET | | |
| Q5101 or | 2SK2632 | POWER MOS FET | | |
| Q5101 or | 2SK2129 | POWER MOS FET | | |
| Q5102 | 2SD2144S/UV/-T | TRANSISTOR | | |
| Q5301 | 2SC1740S/RS/-T | TRANSISTOR | | |
| Q5301 or | 2SC3199/YG/-T | TRANSISTOR | | |
| ⚠ Q5304 | 2SD2144S/UV/-T | TRANSISTOR | | |
| Q5305 | DTA114EUA-X | DIGI TRANSISTOR | | |
| Q5305 or | UN5111-X | DIGI TRANSISTOR | | |
| Q5305 or | RN2302-X | DIGI TRANSISTOR | | |
| Q5305 or | PDTA114EU-X | DIGI TRANSISTOR | | |
| Q5306 | DTC114EUA-X | DIGI TRANSISTOR | | |
| Q5306 or | UN5211-X | DIGI TRANSISTOR | | |
| Q5306 or | RN1302-X | DIGI TRANSISTOR | | |
| Q5306 or | PDTC114EU-X | DIGI TRANSISTOR | | |
| Q5307 | 2SD2144S/UV/-T | TRANSISTOR | | |
| ⚠ Q5321 | 2SD1858/QR/-T | TRANSISTOR | | |
| Q6030 | 2SB1218A/RS/-X | TRANSISTOR | | |
| Q6031 | DTC114EUA-X | DIGI TRANSISTOR | | V600AA |
| Q6031 or | UN5211-X | DIGI TRANSISTOR | | V600AA |
| Q6031 or | RN1302-X | DIGI TRANSISTOR | | V600AA |
| Q6031 or | PDTC114EU-X | DIGI TRANSISTOR | | V600AA |
| Q6032 | DTC114EUA-X | DIGI TRANSISTOR | | V600AA |
| Q6032 or | UN5211-X | DIGI TRANSISTOR | | V600AA |
| Q6032 or | RN1302-X | DIGI TRANSISTOR | | V600AA |
| Q6032 or | PDTC114EU-X | DIGI TRANSISTOR | | V600AA |
| Q6701 | 2SC3936/BC/-X | TRANSISTOR | | V600AG |
| Q7001 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7002 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7003 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7004 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7005 | DTA143TUA-X | DIGI TRANSISTOR | | |
| Q7008 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7008 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7009 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7009 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7010 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7010 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7011 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7011 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7012 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7012 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7013 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7013 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7014 | DTC143TUA-X | DIGI TRANSISTOR | | |
| Q7014 or | UN5216-X | DIGI TRANSISTOR | | |
| Q7106 | 2SB1218A/QR/-X | TRANSISTOR | | |
| Q7106 or | 2SA1576A/QR/-X | TRANSISTOR | | |
| Q7106 or | 2PA1576/R/-X | TRANSISTOR | | |

*The VCR goes to jig RCU mode after replacing the EEPROM and the VCR does not accept some RCU command.
Therefore please set the VCR to the user RCU mode after replacing the EEPROM.
The method of setting the VCR to the user RCU mode is written on the service manual.

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| D201 | 1SS133-T2 | DIODE | | |
| D2001 | 1SS133-T2 | DIODE | | |
| D2001 | or 1SS270A-T2 | SI DIODE | | |
| D2251 | 1SS133-T2 | DIODE | | |
| D2251 | or 1SS270A-T2 | SI DIODE | | |
| D3001 | LNB2301L01VI | LED | | |
| D3002 | 1SS133-T2 | DIODE | | |
| D3002 | or 1SS270A-T2 | SI DIODE | | |
| D3003 | RD39ES/B3/-T2 | Z DIODE | | |
| D3003 | or MTZJ39C-T2 | Z DIODE | | |
| D3004 | 11ES2-T2 | SI DIODE | | |
| D3004 | or 1A3G-T2 | SI DIODE | | |
| ⚠ D3005 | 11ES2-T2 | SI DIODE | | |
| ⚠ D3005 | or 1A3G-T2 | SI DIODE | | |
| ⚠ D3007 | RB721Q-40-T2 | DIODE | | |
| D5001 | S1WB/A/60-4102 | BRIDGE DIODE | | |
| D5001 | or S1WB/A/60-X | BRIDGE DIODE | | |
| D5001 | or S1WB(A)60F4072X | BRIDGE DIODE | | |
| D5101 | AU01-T2 | SI DIODE | | |
| D5101 | or 1SR153-400-T2 | FR DIODE | | |
| D5101 | or ERA18-04-T2 | FR DIODE | | |
| D5101 | or 10ELS4-T2 | FR DIODE | | |
| D5102 | AU01-T2 | SI DIODE | | |
| D5102 | or 1SR153-400-T2 | FR DIODE | | |
| D5102 | or ERA18-04-T2 | FR DIODE | | |
| D5102 | or 10ELS4-T2 | FR DIODE | | |
| D5103 | 1SS133-T2 | DIODE | | |
| D5103 | or 1SS270A-T2 | SI DIODE | | |
| D5105 | 1SS133-T2 | DIODE | | |
| D5105 | or 1SS270A-T2 | SI DIODE | | |
| D5203 | AU01Z-T2 | FR DIODE | | |
| D5203 | or 10ELS2-T2 | FR DIODE | | |
| D5204 | AU01Z-T2 | FR DIODE | | |
| D5204 | or 10ELS2-T2 | FR DIODE | | |
| ⚠ D5207 | AK04-T2 | SB DIODE | | |
| ⚠ D5207 | or 11EQS04-T2 | SB DIODE | | |
| ⚠ D5207 | or 1S4-T2 | SB DIODE | | |
| ⚠ D5207 | or SBO40-T2 | SB DIODE | | |
| ⚠ D5209 | AK04-T2 | SB DIODE | | |
| ⚠ D5209 | or 11EQS04-T2 | SB DIODE | | |
| ⚠ D5209 | or 1S4-T2 | SB DIODE | | |
| ⚠ D5209 | or SBO40-T2 | SB DIODE | | |
| D5210 | AU01Z-T2 | FR DIODE | | |
| D5210 | or ERA18-02-T2 | FR DIODE | | |
| D5210 | or 1SR153-400-T2 | FR DIODE | | |
| D5210 | or 10ELS2-T2 | FR DIODE | | |
| D5210 | or PG104RS-T2 | FR DIODE | | |
| D5301 | MTZJ15C-T2 | Z DIODE | | |
| D5301 | or RD15ES/B3/-T2 | Z DIODE | | |
| D5302 | MTZJ11C-T2 | Z DIODE | | |
| D5302 | or RD11ES/B3/-T2 | Z DIODE | | |
| D5303 | MTZJ5.6A-T2 | Z DIODE | | |
| D5303 | or RD5.6ES/B1/-T2 | Z DIODE | | |
| D5305 | MTZJ5.6C-T2 | Z DIODE | | |
| D5305 | or RD5.6ES/B3/-T2 | Z DIODE | | |
| D6002 | HZ30-2L-T2 | Z DIODE | | |
| D6002 | or HZ30-2LTD | Z DIODE | | |
| D6701 | 1SS133-T2 | DIODE | | |
| D6701 | or 1SS270A-T2 | SI DIODE | | |
| PC3001 | RPI-304J | IC(PHOTO SENSOR) | | |
| PC3002 | RPI-304J | IC(PHOTO SENSOR) | | |
| ⚠ PC5101 | PC123Y22 | PHOTO COUPLER | | |
| C1 | NDC21HJ-151X | C CAPACITOR | 150pF 50V J | |
| C2 | NDC21HJ-470X | C CAPACITOR | 47pF 50V J | |
| C4 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C5 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C6 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C7 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C8 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C9 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C10 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C11 | QEPF1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C13 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C14 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C15 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| C17 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C19 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C20 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C22 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C24 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C25 | QEKJ1HM-335Z | E CAPACITOR | 3.3uF 50V M | |
| C26 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C27 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C30 | NCB21HK-331X | C CAPACITOR | 330pF 50V K | |
| C31 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C32 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C33 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C34 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C35 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C36 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C37 | NDC21HJ-4R0X | C CAPACITOR | 4pF 50V J | |
| C38 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C39 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C40 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C41 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C43 | QEKJ1HM-335Z | E CAPACITOR | 3.3uF 50V M | |
| C44 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C45 | NCB21HK-472X | C CAPACITOR | 4700pF 50V K | |
| C46 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C47 | QEKJ1HM-474Z | E CAPACITOR | 0.47uF 50V M | |
| C48 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C49 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C55 | NDC21HJ-151X | C CAPACITOR | 150pF 50V J | |
| C56 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C57 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C58 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C59 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C60 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C61 | QEKC0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C62 | QCBB1HK-103Y | C CAPACITOR | 0.01uF 50V K | |
| C63 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C64 | QCBB1HK-103Y | C CAPACITOR | 0.01uF 50V K | |
| C71 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C201 | NDC21HJ-220X | C CAPACITOR | 22pF 50V J | |
| C202 | QERF1EM-475Z | E CAPACITOR | 4.7uF 25V M | |
| C203 | NCB21HK-102X | C CAPACITOR | 1000pF 50V K | |
| C204 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C205 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C207 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C209 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C210 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C212 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C213 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2001 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2002 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C2003 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C2005 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2006 | NCB21HK-682X | C CAPACITOR | 6800pF 50V K | |
| C2007 | QEKJ1CM-226Z | E CAPACITOR | 22uF 16V M | |
| C2008 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2009 | NCB21HK-122X | C CAPACITOR | 1200pF 50V K | |
| C2010 | NCB21HK-152X | C CAPACITOR | 1500pF 50V K | |
| C2011 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2012 | QEKC1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2051 | NCB21HK-331X | C CAPACITOR | 330pF 50V K | |
| C2052 | QFLC1HJ-823Z | M CAPACITOR | 0.082uF 50V J | |
| C2053 | NCB21HK-472X | C CAPACITOR | 4700pF 50V K | |
| C2054 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C2055 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2201 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2202 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2203 | QEKJ1HM-475Z | E CAPACITOR | 4.7uF 50V M | |
| C2204 | QEKJ0JM-336Z | E CAPACITOR | 33uF 6.3V M | |
| C2205 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2206 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2207 | NCB21HK-153X | C CAPACITOR | 0.015uF 50V K | |
| C2208 | NCB21HK-153X | C CAPACITOR | 0.015uF 50V K | |
| C2209 | QERF1CM-106Z | E CAPACITOR | 10uF 16V M | |
| C2210 | QERF1CM-106Z | E CAPACITOR | 10uF 16V M | |
| C2211 | QEKJ0JM-336Z | E CAPACITOR | 33uF 6.3V M | |
| C2212 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C2214 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2215 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| C2216 | QEKJ1CM-476Z | E CAPACITOR | 47uF 16V M | |
| C2218 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2219 | QEKJ1CM-226Z | E CAPACITOR | 22uF 16V M | |
| C2220 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C2221 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C2222 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2223 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C2224 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C2227 | QERF1CM-106Z | E CAPACITOR | 10uF 16V M | |
| C2232 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C2233 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C2251 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2252 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2253 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2254 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C2255 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2256 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2257 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C2258 | NDC21HJ-181X | C CAPACITOR | 180pF 50V J | |
| C2259 | QEKJ1HM-334Z | E CAPACITOR | 0.33uF 50V M | |
| C3004 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3011 | QETN0JM-108Z | E CAPACITOR | 1000uF 6.3V M | |
| C3012 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C3013 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3014 | QERF0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C3016 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3022 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3024 | NDC21HJ-120X | C CAPACITOR | 12pF 50V J | |
| C3025 | QAT3725-300Z | TRIM CAPACITOR | 30pF,TIMER CLOCK | |
| C3030 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C3031 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3033 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C3036 | NDC21HJ-180X | C CAPACITOR | 18pF 50V J | |
| C3037 | NDC21HJ-120X | C CAPACITOR | 12pF 50V J | |
| C3045 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3047 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3048 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3050 | NCF21EZ-104X | C CAPACITOR | 0.1uF 25V Z | |
| C3051 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | V600AA |
| C3052 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C3053 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C3056 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C3057 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C3071 | QEKJ1CM-336Z | E CAPACITOR | 33uF 16V M | |
| C3072 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C4002 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C4003 | NCB21HK-102X | C CAPACITOR | 1000pF 50V K | |
| C4004 | QERF1CM-226Z | E CAPACITOR | 22uF 16V M | |
| C4005 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C4006 | QERF0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C4008 | QEQF1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C4009 | NCB21HK-563X | C CAPACITOR | 0.056uF 50V K | |
| C4010 | NCB21EK-223X | C CAPACITOR | 0.022uF 25V K | |
| C4011 | NCB21EK-104X | C CAPACITOR | 0.1uF 25V K | |
| C4012 | QERF1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C4014 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C4015 | NCB21HK-102X | C CAPACITOR | 1000pF 50V K | |
| C4016 | NDC21HJ-101X | C CAPACITOR | 100pF 50V J | |
| C4031 | QEKJ1CM-336Z | E CAPACITOR | 33uF 16V M | |
| ⚠ C5001 | QFZ9072-473 | MM CAPACITOR | 0.047uF AC250V K | |
| ⚠ C5004 | QCZ9071-222 | C CAPACITOR | 2200pF AC400V M | |
| C5006 | QEZ0375-686 | E CAPACITOR | 68uF 400V M | |
| C5101 | QCZ0212-472 | C CAPACITOR | 4700pF 1kV K | |
| C5102 | QCZ0339-101Z | C CAPACITOR | 100pF 1kV K | |
| C5104 | QEKJ1HM-105Z | E CAPACITOR | 1uF 50V M | |
| C5105 | QFN31HJ-183Z | M CAPACITOR | 0.018uF 50V J | |
| C5106 | QCBB1HJ-271Y | C CAPACITOR | 270pF 50V J | |
| C5107 | QFV91HJ-104Z | MF CAPACITOR | 0.1uF 50V J | |
| C5202 | QETN1CM-108Z | E CAPACITOR | 1000uF 16V M | |
| C5203 | QEMT1AM-128 | E CAPACITOR | 1200uF 10V M | |
| C5204 | QETJ2AM-475Z | E CAPACITOR | 4.7uF 100V M | |
| C5206 | QEKJ1CM-476Z | E CAPACITOR | 47uF 16V M | |
| C5207 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |
| C5301 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |
| C5303 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |
| C5305 | QFVF1HJ-274Z | MF CAPACITOR | 0.27uF 50V J | |
| C5307 | QEKJ1CM-476Z | E CAPACITOR | 47uF 16V M | |
| C5308 | QEKJ1CM-107Z | E CAPACITOR | 100uF 16V M | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| C6006 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6008 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6013 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6014 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6016 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6032 | NCB21EK-473X | C CAPACITOR | 0.047uF 25V K | |
| C6037 | QEKJ1HM-106Z | E CAPACITOR | 10uF 50V M | |
| C6501 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C6502 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6701 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | V600AG |
| C6703 | NDC21HJ-181X | C CAPACITOR | 180pF 50V J | V600AG |
| C6704 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6707 | NDC21HJ-470X | C CAPACITOR | 47pF 50V J | |
| C6708 | NDC21HJ-8R0X | C CAPACITOR | 8pF 50V J | |
| C6709 | NDC21HJ-2R0X | C CAPACITOR | 2pF 50V J | |
| C6713 | NCF21CZ-224X | C CAPACITOR | 0.22uF 16V Z | |
| C6714 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C6715 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C6716 | NCB21HK-222X | C CAPACITOR | 2200pF 50V K | |
| C6717 | QEKJ1HM-225Z | E CAPACITOR | 2.2uF 50V M | |
| C6719 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C6720 | QEKJ1EM-106Z | E CAPACITOR | 10uF 25V M | |
| C6721 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C6723 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C7011 | QEKJ0JM-476Z | E CAPACITOR | 47uF 6.3V M | |
| C7114 | QETN0JM-477Z | E CAPACITOR | 470uF 6.3V M | |
| C7119 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7120 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7128 | QEKJ0JM-107Z | E CAPACITOR | 100uF 6.3V M | |
| C7133 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| C7164 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7165 | NCB21HK-681X | C CAPACITOR | 680pF 50V K | |
| C7197 | NCB21HK-103X | C CAPACITOR | 0.01uF 50V K | |
| R1 | NRSA02J-622X | MG RESISTOR | 6.2kΩ 1/10W J | |
| R2 | NRSA02J-152X | MG RESISTOR | 1.5kΩ 1/10W J | |
| R3 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R11 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R12 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R21 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R22 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R31 | NRSA02J-471X | MG RESISTOR | 470Ω 1/10W J | |
| R36 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R37 | NRSA02J-153X | MG RESISTOR | 15kΩ 1/10W J | |
| R201 | NRSA02J-471X | MG RESISTOR | 470Ω 1/10W J | |
| R202 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R203 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R204 | NRSA02J-474X | MG RESISTOR | 470kΩ 1/10W J | |
| R205 | NRSA02J-301X | MG RESISTOR | 300Ω 1/10W J | |
| R208 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R209 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R210 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R214 | NRSA02J-474X | MG RESISTOR | 470kΩ 1/10W J | |
| R2003 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R2005 | QRE141J-153Y | C RESISTOR | 15kΩ 1/4W J | |
| R2007 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2008 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R2010 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R2013 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R2014 | NRSA02J-394X | MG RESISTOR | 390kΩ 1/10W J | |
| R2015 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R2016 | NRSA02J-393X | MG RESISTOR | 39kΩ 1/10W J | |
| R2017 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2018 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2019 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2021 | NRSA02J-333X | MG RESISTOR | 33kΩ 1/10W J | |
| R2022 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R2023 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R2024 | QRE141J-103Y | C RESISTOR | 10kΩ 1/4W J | |
| R2053 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2054 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R2055 | NRSA02J-3R3X | MG RESISTOR | 3.3Ω 1/10W J | |
| R2056 | QRE141J-820Y | C RESISTOR | 82Ω 1/4W J | |
| R2057 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2058 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2059 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2060 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R2201 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| R2202 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2203 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2204 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2205 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2206 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2207 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2208 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2209 | NRSA02J-681X | MG RESISTOR | 680Ω 1/10W J | |
| R2210 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2211 | NRSA02J-272X | MG RESISTOR | 2.7kΩ 1/10W J | |
| R2212 | NRSA02J-272X | MG RESISTOR | 2.7kΩ 1/10W J | |
| R2213 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2214 | NRSA02J-681X | MG RESISTOR | 680Ω 1/10W J | |
| R2215 | QRE141J-181Y | C RESISTOR | 180Ω 1/4W J | |
| R2216 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R2217 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2218 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R2219 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R2220 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R2222 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2223 | NRSA02J-511X | MG RESISTOR | 510Ω 1/10W J | |
| R2224 | NRSA02J-511X | MG RESISTOR | 510Ω 1/10W J | |
| R2225 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2226 | NRSA02J-273X | MG RESISTOR | 27kΩ 1/10W J | |
| R2227 | NRSA02J-393X | MG RESISTOR | 39kΩ 1/10W J | |
| R2228 | NRSA02J-273X | MG RESISTOR | 27kΩ 1/10W J | |
| R2229 | NRSA02J-393X | MG RESISTOR | 39kΩ 1/10W J | |
| R2230 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2231 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2232 | NRSA02J-473X | MG RESISTOR | 47kΩ 1/10W J | |
| R2233 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R2234 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R2251 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R2252 | NRSA02J-221X | MG RESISTOR | 220Ω 1/10W J | |
| R2253 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R2255 | NRSA02J-273X | MG RESISTOR | 27kΩ 1/10W J | |
| R3024 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3025 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3028 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3030 | QRE121J-102Y | C RESISTOR | 1kΩ 1/2W J | |
| R3031 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3033 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3034 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3035 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3038 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3039 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3054 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3059 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3060 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3061 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3062 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R3063 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3064 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3065 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3066 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3067 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3069 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3072 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3073 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3074 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3077 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3080 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R3082 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3085 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3088 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3091 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3092 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R3098 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | V600AA |
| R3102 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R3205 | NRSA02J-181X | MG RESISTOR | 180Ω 1/10W J | |
| R3207 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R3208 | NRSA02J-121X | MG RESISTOR | 120Ω 1/10W J | |
| R3209 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R3210 | NRSA02J-121X | MG RESISTOR | 120Ω 1/10W J | |
| R3211 | NRSA02J-183X | MG RESISTOR | 18kΩ 1/10W J | |
| R3212 | NRSA02J-474X | MG RESISTOR | 470kΩ 1/10W J | |
| R3213 | NRSA02J-334X | MG RESISTOR | 330kΩ 1/10W J | |
| R3214 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3215 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3216 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3217 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3218 | QRE141J-472Y | C RESISTOR | 4.7kΩ 1/4W J | |
| R3219 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3220 | NRSA02J-104X | MG RESISTOR | 100kΩ 1/10W J | |
| R3222 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3223 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3224 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3225 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3229 | NRSA02J-105X | MG RESISTOR | 1MΩ 1/10W J | |
| R3235 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3236 | NRSA02J-332X | MG RESISTOR | 3.3kΩ 1/10W J | |
| R3246 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R3248 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R3253 | QRE141J-103Y | C RESISTOR | 10kΩ 1/4W J | |
| ⚠ R3256 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R4003 | NRSA02J-561X | MG RESISTOR | 560Ω 1/10W J | |
| R4004 | NRSA02J-561X | MG RESISTOR | 560Ω 1/10W J | |
| R4005 | NRSA02J-562X | MG RESISTOR | 5.6kΩ 1/10W J | |
| R4007 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R4009 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R4012 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R4015 | NRSA02J-562X | MG RESISTOR | 5.6kΩ 1/10W J | |
| R4017 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5101 | QRE141J-224Y | C RESISTOR | 220kΩ 1/4W J | |
| R5102 | QRE141J-224Y | C RESISTOR | 220kΩ 1/4W J | |
| R5103 | QRE141J-683Y | C RESISTOR | 68kΩ 1/4W J | |
| R5104 | QRG02GJ-683 | OMF RESISTOR | 68kΩ 2W J | |
| R5106 | QRT01DJ-R39X | MF RESISTOR | 0.39Ω 1W J | |
| R5107 | QRE121J-331Y | C RESISTOR | 330Ω 1/2W J | |
| R5108 | NRSA02J-152X | MG RESISTOR | 1.5kΩ 1/10W J | |
| R5109 | QRE141J-561Y | C RESISTOR | 560Ω 1/4W J | |
| R5110 | NRSA02J-224X | MG RESISTOR | 220kΩ 1/10W J | |
| R5111 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5112 | NRSA02J-221X | MG RESISTOR | 220Ω 1/10W J | |
| R5302 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5303 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R5304 | QRE141J-471Y | C RESISTOR | 470Ω 1/4W J | |
| R5306 | NRSA02J-181X | MG RESISTOR | 180Ω 1/10W J | |
| R5310 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R5312 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R5313 | NRSA02J-821X | MG RESISTOR | 820Ω 1/10W J | |
| R5319 | NRSA02J-221X | MG RESISTOR | 220Ω 1/10W J | |
| R5332 | QRL02DJ-391X | OMF RESISTOR | 390Ω 2W J | |
| R6020 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6021 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6030 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6031 | NRSA02J-271X | MG RESISTOR | 270Ω 1/10W J | |
| R6032 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R6033 | NRSA02J-182X | MG RESISTOR | 1.8kΩ 1/10W J | |
| R6050 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6051 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6052 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6056 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R6080 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6701 | NRSA02J-392X | MG RESISTOR | 3.9kΩ 1/10W J | V600AG |
| R6702 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | V600AG |
| R6703 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | V600AG |
| R6704 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | V600AG |
| R6705 | NRSA02J-271X | MG RESISTOR | 270Ω 1/10W J | V600AG |
| R6707 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R6708 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R6709 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6710 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R6711 | QRE141J-104Y | C RESISTOR | 100kΩ 1/4W J | |
| R6712 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6713 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R6714 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R6715 | NRSA02J-123X | MG RESISTOR | 12kΩ 1/10W J | |
| R6716 | QRE141J-470Y | C RESISTOR | 47Ω 1/4W J | |
| R6719 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R6720 | QRE141J-562Y | C RESISTOR | 5.6kΩ 1/4W J | |
| R6721 | NRSA02J-562X | MG RESISTOR | 5.6kΩ 1/10W J | |
| R7002 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7003 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7004 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7005 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |

| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| R7006 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7007 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7008 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7015 | NRSA02J-102X | MG RESISTOR | 1kΩ 1/10W J | |
| R7020 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R7021 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R7022 | NRSA02J-182X | MG RESISTOR | 1.8kΩ 1/10W J | |
| R7023 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R7024 | NRSA02J-272X | MG RESISTOR | 2.7kΩ 1/10W J | |
| R7025 | NRSA02J-472X | MG RESISTOR | 4.7kΩ 1/10W J | |
| R7026 | NRSA02J-682X | MG RESISTOR | 6.8kΩ 1/10W J | |
| R7030 | NRSA02J-103X | MG RESISTOR | 10kΩ 1/10W J | |
| R7031 | NRSA02J-122X | MG RESISTOR | 1.2kΩ 1/10W J | |
| R7032 | NRSA02J-182X | MG RESISTOR | 1.8kΩ 1/10W J | |
| R7033 | NRSA02J-222X | MG RESISTOR | 2.2kΩ 1/10W J | |
| R7121 | NRSA02J-750X | MG RESISTOR | 75Ω 1/10W J | |
| R7122 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7123 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7131 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R7132 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7133 | QRE141J-331Y | C RESISTOR | 330Ω 1/4W J | |
| R7134 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7151 | NRSA02J-750X | MG RESISTOR | 75Ω 1/10W J | |
| R7152 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7153 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| R7160 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7161 | NRSA02J-101X | MG RESISTOR | 100Ω 1/10W J | |
| R7162 | NRSA02J-331X | MG RESISTOR | 330Ω 1/10W J | |
| R7163 | NRSA02J-750X | MG RESISTOR | 75Ω 1/10W J | |
| | | | | |
| L3 | QQL29BJ-100Z | P COIL | 10uH J | |
| L5 | QQL29BJ-100Z | P COIL | 10uH J | |
| L6 | QQL29BJ-100Z | P COIL | 10uH J | |
| L7 | QQR0967-001 | CHOKE COIL | | |
| L10 | QQL29BJ-100Z | P COIL | 10uH J | |
| L201 | QQL071J-150Y | COIL | 15uH J | |
| L203 | QQL071J-270Y | COIL | 27uH J | |
| L2251 | QQL29BJ-100Z | P COIL | 10uH J | |
| L2252 | QQL29BJ-151Z | P COIL | 150uH J | |
| L3001 | QQL231J-100Y | COIL | 10uH J | |
| L5201 | PELN1184 | CHOKE COIL | | |
| L5202 | PELN1184 | CHOKE COIL | | |
| L6001 | QQL29BK-1R0Z | P COIL | 1uH K | |
| L6002 | QQL29BK-1R0Z | P COIL | 1uH K | |
| L6501 | QQL29BK-1R0Z | P COIL | 1uH K | |
| L6702 | QQL231J-3R3Y | COIL | 3.3uH J | V600AG |
| L7107 | QQL29BJ-100Z | P COIL | 10uH J | |
| T2051 | PELN0832 | OSC TRANS | | |
| ⚠ T5001 | QQS0186-001 | SW TRANSF | | |
| | | | | |
| B1 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B201 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B2003 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B3003 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B6051 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B6701 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | V600AA |
| B7102 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B7108 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B7113 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| B7114 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| CN1 | QGF1201C2-09 | CONNECTOR | FFC/FPC (1-9) | |
| CN2001 | QGF1207C1-06 | CONNECTOR | FFC/FPC (1-6) | |
| CN2002 | QGB2532J1-02 | CONNECTOR | B-B (1-2) | |
| CN3001 | QGB2032M4-12 | CONNECTOR | B-B (1-12) | |
| ⚠ CN5001 | QGA7901C3-02 | CONNECTOR | W-B (1-2) | |
| ⚠ CP3002 | NMFZ012-1R0X-M | FUSE | 1A | |
| ⚠ CP4002 | NMFZ012-1R0X-M | FUSE | 1A | |
| DI7001 | LTG-Y2K16M-02J | LED | | |
| ET1 | PQ21623-2-5 | EARTH PLATE(RF) | | |
| ⚠ F5001 | QMF51E2-2R0-J1 | FUSE | 2A AC250V | |
| FC5001 | QNG0006-001Z | FUSE CLIP | | |
| FC5002 | QNG0006-001Z | FUSE CLIP | | |
| FW7106 | QUM022-30A4A4 | PARA RIBON WIRE | | |
| HS1 | LP40090-001A | HEAT SINK | Q5101 | |
| J7103 | QNN0552-001 | PIN JACK | REAR A/V OUT | |
| J7104 | QNN0552-001 | PIN JACK | REAR A/V IN | |
| J7105 | QNN0381-002 | PIN JACK | FRONT A/V IN | |
| JS3001 | QSW0954-002 | ROTARY ENCODER | | |

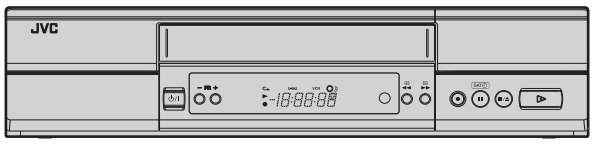
| ⚠ Symbol No. | Part No. | Part Name | Description | Local |
|---|---|---|---|---|
| K5101 | QQR0678-001Z | FERRITE BEADS | | |
| K6701 | NQR0200-003X | FERRITE BEADS | | |
| K6702 | NQR0200-003X | FERRITE BEADS | | |
| K6703 | NQR0200-003X | FERRITE BEADS | | |
| K6704 | NQR0200-003X | FERRITE BEADS | | |
| K6705 | NQR0200-003X | FERRITE BEADS | | |
| K6706 | NQR0200-003X | FERRITE BEADS | | |
| ⚠ LF5002 | QQR0978-001 | LINE FILTER | | |
| OT1 | QYTDST3006Z | TAP SCREW | 3mm x 6mm,Q5101 | |
| S3001 | QSW0602-004 | PUSH SWITCH | REC.SAFETY | |
| S7002 | QSW0456-002Z | TACT SWITCH | POWER | |
| S7003 | QSW0456-002Z | TACT SWITCH | PR - | |
| S7004 | QSW0456-002Z | TACT SWITCH | REW | |
| S7006 | QSW0456-002Z | TACT SWITCH | FWD | |
| S7010 | QSW0456-002Z | TACT SWITCH | REC | |
| S7011 | QSW0456-002Z | TACT SWITCH | PAUSE | |
| S7013 | QSW0456-002Z | TACT SWITCH | STOP/EJECT | |
| S7015 | QSW0456-002Z | TACT SWITCH | PLAY | |
| S7017 | QSW0456-002Z | TACT SWITCH | PR + | |
| SD1 | LP21105-002A | SHIELD CASE | | |
| ⚠ TB1 | LP20316-010A | TERMINAL BOARD | | |
| TU6001 | QAU0261-002 | TUNER | | |
| W1 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W2 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W4 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W5 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W6 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W7 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W8 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W9 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W11 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W13 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W15 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W17 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W19 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W20 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W21 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W24 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W25 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W26 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W27 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W28 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W30 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W32 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W33 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| W34 | NRSA02J-0R0X | MG RESISTOR | 0Ω 1/10W J | |
| X1 | QAX0740-001 | CRYSTAL | 4.433619MHz | |
| X2 | QAX0739-001 | CRYSTAL | 3.57MHz | |
| X3001 | QAX0445-001 | CRYSTAL | 32.768kHz | |
| X3002 | QAX0527-001 | CRYSTAL | 10.000000MHz | |
| X6701 | QAX0443-001 | CRYSTAL | 18.432MHz | |

JVC

# SERVICE MANUAL

## VIDEO CASSETTE RECORDER

# HR-S5960Ex,HR-S5961Ex, HR-S5962Ex,HR-S5963Ex, HR-S5965EF,HR-S5965EK, HR-S5966EK



VIDEO Plus+ (EK model)
SHOWVIEW (other model)
S-VHS
Hi-Fi
Super VHS ET

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700 (MECHANISM ASSEMBLY).

## SPECIFICATION *(The specifications shown pertain specifically to the model HR-S5960EX,S5961EX,S5962EX,S5963EX)*

### GENERAL

| | |
|---|---|
| Power requirement | AC 220 V - 240 V~, 50 Hz/60 Hz |
| Power consumption | |
| Power on | 16 W |
| Power off | 3.5 W |
| Temperature | |
| Operating | 5°C to 40°C |
| Storage | -20°C to 60°C |
| Operating position | Horizontal only |
| Dimensions (W x H x D) | 400 mm x 94 mm x 270 mm |
| Weight | 3.1 kg |
| Format | S-VHS/VHS PAL standard |
| Maximum recording time | |
| (SP) | 240 min. with E-240 video cassette |
| (LP) | 480 min. with E-240 video cassette |

### VIDEO/AUDIO

| | |
|---|---|
| Signal system | PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields |
| Recording system | DA4 (Double Azimuth) head helical scan system |
| Signal-to-noise ratio | 45 dB |
| Horizontal resolution | |
| VHS | 250 lines |
| S-VHS | 400 lines |
| Frequency range | |
| Normal audio | 70 Hz to 10,000 Hz |
| Hi-Fi audio | 20 Hz to 20,000 Hz |
| Input/Output | 21-pin SCART connectors: IN/OUT x 1, IN/DECODER x 1RCA connectors:AUDIO OUT x 1 |

### TUNER/TIMER

| | |
|---|---|
| TV channel storage capacity | 99 positions (+AUX position) |
| Tuning system | Frequency synthesized tuner |
| Channel coverage | |
| VHF | 47 MHz - 89 MHz/104 MHz - 300 MHz/302 MHz - 470 MHz |
| UHF | 470 MHz - 862 MHz |
| Aerial output | UHF channels 22 - 69 (Adjustable) |
| Memory backup time | Approx. 10 min. |

### ACCESSORIES

| | |
|---|---|
| Provided accessories | : RF cable, Infrared remote control unit, Lithium battery - CR2032- |



COPYRIGHT © 2003 VICTOR COMPANY OF JAPAN, LTD.

No.82961
2003/4

# TABLE OF CONTENTS


**1 PRECAUTIONS . . . . . 1-3**
1.1 SAFTY PRECAUTIONS . . . . . 1-3
**2 SPECIFIC SERVICE INSTRUCTIONS . . . . . 1-5**
2.1 Manually removing the cassette tape . . . . . 1-5
2.2 Removing the major parts . . . . . 1-6
2.3 Emergency display function. . . . . 1-8
2.4 Service position . . . . . 1-13
2.5 Jig RCU mode . . . . . 1-13
2.6 Mechanism service mode . . . . . 1-14
2.7 Maintenance and inspection . . . . . 1-14
**3 ADJUSTMENT . . . . . 1-15**
3.1 Before adjustment . . . . . 1-15
3.2 Mechanism compatibility adjustment. . . . . 1-16
3.3 Electrical adjustment . . . . . 1-18

**CHARTS AND DIAGRAMS**
BOARD INTERCONNECTIONS . . . . . 2-3
MAIN (VIDEO/N.AUDIO) SCHEMATIC DIAGRAM. . . . . 2-5
MAIN (S-SUB) SCHEMATIC DIAGRAM . . . . . 2-7
MAIN (SYSCON) SCHEMATIC DIAGRAM. . . . . 2-9
DIFFERENCE TABLE OF SYSTEM CONTROL CIRCUIT . . . . . 2-11
REMOTE CONTROLLER SCHEMATIC DIAGRAM . . . . . 2-11
FDP GRID ASSIGNMENT AND ANODE CONNECTION. . . . . 2-11
MAIN (VPS/PDC SLICER) SCHEMATIC DIAGRAM . . . . . 2-12
MAIN (FMA) SCHEMATIC DIAGRAM. . . . . 2-13
MAIN (SW.REG) SCHEMATIC DIAGRAM . . . . . 2-15
MAIN (TUNER) SCHEMATIC DIAGRAM . . . . . 2-17
MAIN (FRONT), LED AND ADV.JOG SCHEMATIC DIAGRAMS. . . . . 2-19
MAIN (TERMINAL) SCHEMATIC DIAGRAM . . . . . 2-21
S-P CONVERTER SCHEMATIC DIAGRAM [HR-S5965EF]. . . . . 2-23
SECAM SCHEMATIC DIAGRAM [HR-S5965EF] . . . . . 2-25
COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10189-001C. . . . . 2-26
MAIN CIRCUIT BOARD . . . . . 2-27
S-P COVERTER AND SECAM CIRCUIT BOARDS [HR-S5965EF]. . . . . 2-29
CPU PIN FUNCTION . . . . . 2-30
SYSTEM CONTROL BLOCK DIAGRAM . . . . . 2-31
AUDIO BLOCK DIAGRAM . . . . . 2-32
VIDEO BLOCK DIAGRAM (1). . . . . 2-33
VIDEO BLOCK DIAGRAM (2). . . . . 2-35
VOLTAGE CHARTS . . . . . 2-37

**PARTS LIST**
1. EXPLODED VIEW
1.1 PACKING AND ACCESSORY ASSEMBLY <M1> . . . . . 3-1
1.2 FINAL ASSEMBLY <M2>. . . . . 3-2
1.3 MECHANISM ASSEMBLY <M4>. . . . . 3-3
2. PARTS LIST. . . . . 3-4
PACKING AND ACCESSORY ASSEMBLY <M1> . . . . . 3-4
FINAL ASSEMBLY <M2> . . . . . 3-4
MECHANISM ASSEMBLY <M4> . . . . . 3-4
MAIN BOARD ASSEMBLY <03>. . . . . 3-5
A/C HEAD BOARD ASSEMBLY <12>. . . . . 3-12
LOADING MOTOR BOARD ASSEMBLY <55>. . . . . 3-12
S-P CONVERTER BOARD ASSEMBLY <87> . . . . . 3-12
SECAM BOARD ASSEMBLY <88>. . . . . 3-13


The following table indicates main different points between models HR-S5960EX,HR-S5961EX,HR-S5962EX, HR-S5963EX,HR-S5963EX,HR-S5965EF,HR-S5965EK and HR-S5966EK.

| MODEL / ITEM | HR-S5960EX | HR-S5961EX | HR-S5962EX | HR-S5963EX | HR-S5965EF | HR-S5965EK | HR-S5966EK |
|---|---|---|---|---|---|---|---|
| POWER PLUG | CEE | ← | ← | ← | ← | 3PIN | ← |
| BODY COLOUR | PURE SILVER | BLACK | PURE SILVER & DARK SILVER[WINDOW & CASSETTE DOOR] | PURE SILVER & DARK SILVER[WINDOW & L/R COVER] | PURE SILVER | ← | BLACK |
| RCU COLOUR | LIGHT GRAY | BLACK | LIGHT GRAY | ← | ← | ← | BLACK |
| SCART CABLE | OPTIONAL | ← | ← | ← | PROVIDED | OPTIONAL | ← |
| MESECAM | USED(MANUAL) | ← | ← | ← | USED(PB ONLY) | NOT USED | ← |
| DECODER(L-2) | USED | ← | ← | ← | ← | NOT USED | ← |
| BROADCASTING STANDARD | B/G,D/K | ← | ← | ← | L,L',B/G | I | ← |
| STEREO DECODER | NICAM/A2 | ← | ← | ← | NICAM(L,B/G)/ A2(B/G) | NICAM | ← |
| RF OUT | USED | ← | ← | ← | NOT USED | USED | ← |
| VCR PLUS+ | SHOWVIEW | ← | ← | ← | ← | VIDEO PLUS+ | ← |
| VPS | USED | ← | ← | ← | NOT USED | ← | ← |
| OSD LANGUAGE | 13 LANGUAGES | ← | ← | ← | FRENCH | ENGLISH | ← |

**NOTE:**
Mark ← is same as left.

# SECTION 1
# PRECAUTIONS

## 1.1 SAFTY PRECAUTIONS

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold.However,in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

### 1.1.1 Precautions during Servicing

(1) Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product.When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

(2) Parts identified by the ⚠symbol and shaded ( ) parts are critical for safety.
Replace only with specified part numbers.
**NOTE :**
**Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.**

(3) Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

(4) Use specified internal wiring. Note especially:
- Wires covered with PVC tubing
- Double insulated wires
- High voltage leads

(5) Use specified insulating materials for hazardous live parts. Note especially:
- Insulation Tape
- PVC tubing
- Spacers
- Insulation sheets for transistors
- Barrier

(6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

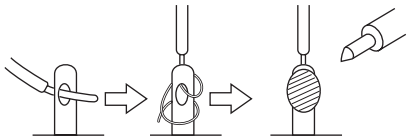


Fig.1-1-1

(7) Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

(8) Check that replaced wires do not contact sharp edged or pointed parts.

(9) When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

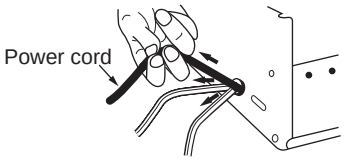



Fig.1-1-2

(10) Also check areas surrounding repaired locations.

(11) Products using cathode ray tubes (CRTs)In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits.Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

(12) Crimp type wire connector
In such cases as when replacing the power transformer in sets where the connections between the power cord and power trans former primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.
- **Connector part number** :E03830-001
- **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- **Replacement procedure**
  a) Remove the old connector by cutting the wires at a point close to the connector.
  Important : Do not reuse a connector (discard it).

Fig.1-1-3

  b) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

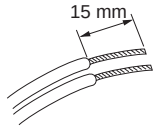



Fig.1-1-4

  c) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

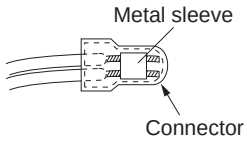



Fig.1-1-5

  d) As shown in Fig.1-1-6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

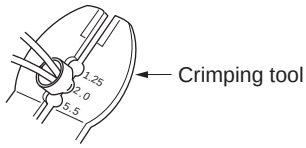



Fig.1-1-6

  e) Check the four points noted in Fig.1-1-7.

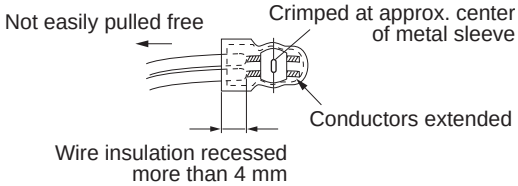

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.1-1-7

### 1.1.2 Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

(1) Insulation resistance test
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
See table 1 below.

(2) Dielectric strength test
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See Fig.1-1-11 below.

(3) Clearance distance
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See Fig.1-1-11 below.

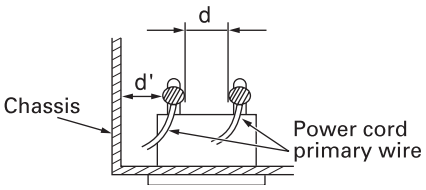


Fig.1-1-8

(4) Leakage current test
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON)
Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig.1-1-9 and following Fig.1-1-12.

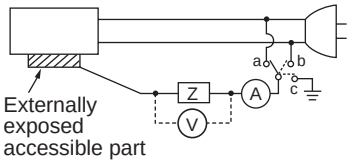
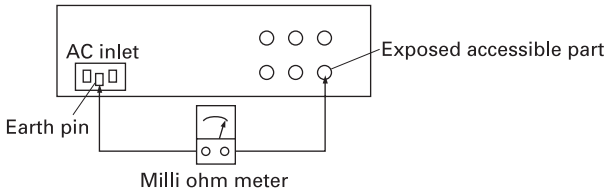


Fig.1-1-9

(5) Grounding (Class 1 model only)
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See Fig.1-1-10 and grounding specifications.




**Grounding Specifications**

| Region | Grounding Impedance (Z) |
|---|---|
| USA & Canada | Z ≦ 0.1 ohm |
| Europe & Australia | Z ≦ 0.5 ohm |

Fig.1-1-10

| AC Line Voltage | Region | Insulation Resistance (R) | Dielectric Strength | Clearance Distance (d), (d') |
|---|---|---|---|---|
| 100 V | Japan | R ≧ 1 MΩ/500 V DC | AC 1 kV 1 minute | d, d' ≧ 3 mm |
| 100 to 240 V | | | AC 1.5 kV 1 miute | d, d' ≧ 4 mm |
| 110 to 130 V | USA & Canada | 1 MΩ ≦ R ≦ 12 MΩ/500 V DC | AC 1 kV 1 minute | d, d' ≧ 3.2 mm |
| 110 to 130 V<br>200 to 240 V | Europe & Australia | R ≧ 10 MΩ/500 V DC | AC 3 kV 1 minute (Class Ⅱ)<br>AC 1.5 kV 1 minute (Class Ⅰ) | d ≧ 4 mm<br>d' ≧ 8 mm (Power cord)<br>d' ≧ 6 mm (Primary wire) |

Fig.1-1-11

| AC Line Voltage | Region | Load Z | Leakage Current (i) | a, b, c |
|---|---|---|---|---|
| 100 V | Japan | 1 kΩ | i ≦ 1 mA rms | Exposed accessible parts |
| 110 to 130 V | USA & Canada | 0.15 μF, 1.5 kΩ | i ≦ 0.5 mA rms | Exposed accessible parts |
| 110 to 130 V<br>220 to 240 V | Europe & Australia | 2 kΩ | i ≦ 0.7 mA peak<br>i ≦ 2 mA dc | Antenna earth terminals |
| | | 50 kΩ | i ≦ 0.7 mA peak<br>i ≦ 2 mA dc | Other terminals |

Fig.1-1-12

**NOTE :**

These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

# SECTION 2
# SPECIFIC SERVICE INSTRUCTIONS

### 2.1 Manually removing the cassette tape

If you cannot remove the cassette tape which is loaded because of any electrical or mechanical failures, manually remove it by taking the following steps.

(1) Unplug the power cord plug from the power outlet.

(2) Refer to the disassembly procedure of the VCR and perform the disassembly of the major parts before removing the mechanism assembly. (See Fig. 2-1a)

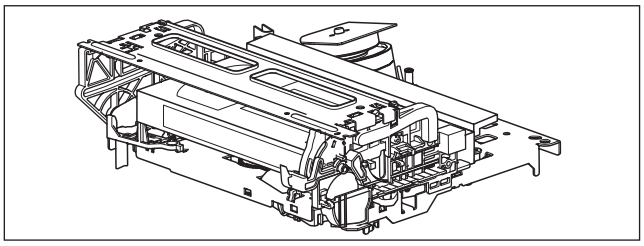


Fig.2-1a

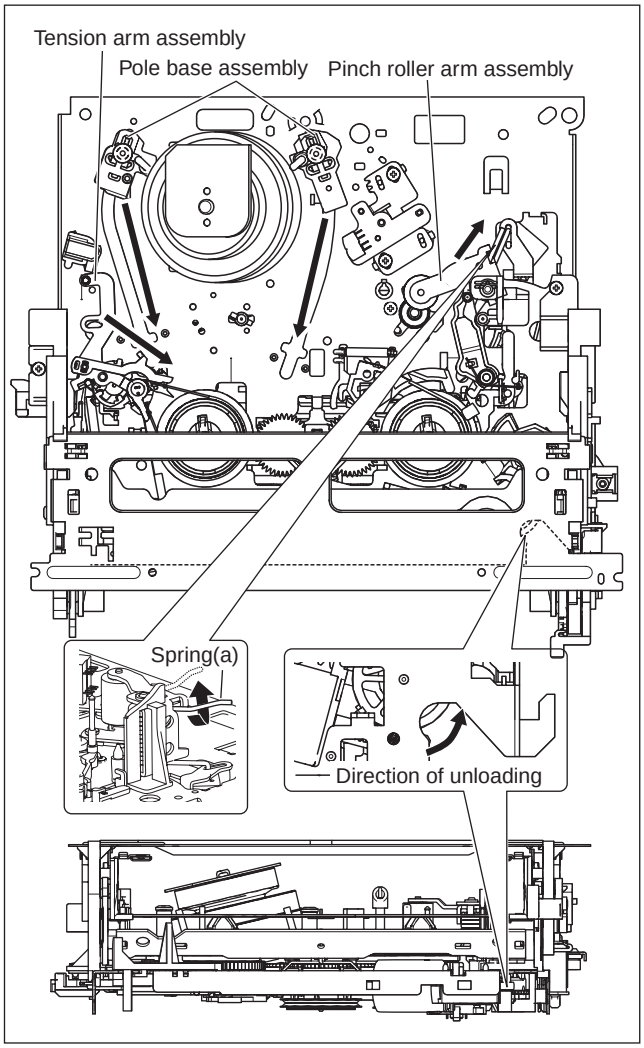



Fig.2-1b

(3) Unload the pole base assembly by manually turning the gear of the loading motor until the pole base assembly is hidden behind the cassette lid. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig.2-1b )

**In case of mechanical failures, while keeping the tension arm assembly free from tension, pull out the tape on the pole base assembly. Take the spring(a) of the pinch roller arm assembly off the hook, and detach it from the tape.**

(4) Remove the screw (a) of the side frame (L/R).

(5) Hold the slack tape and cassette cover together, lift the cassette tape, top frame, cassette holder and side frames (L, R) together from the rear and remove them by dis-engaging the hooks (a) and (b).

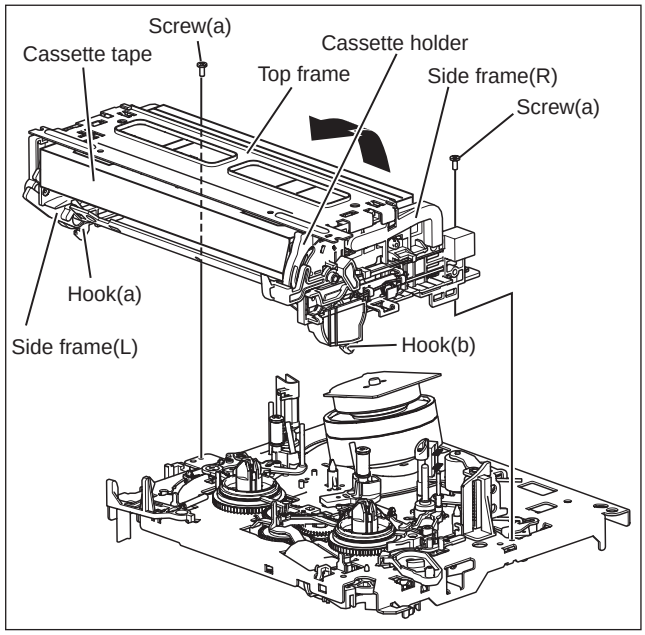



Fig.2-1c

(6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

## 2.2 Removing the major parts

### 2.2.1 How to read the procedure table

This table shows the steps for disassembly of the externally furnished parts and board assemblies. Reverse these steps when re-assembling them.

| Step/ Loc No. | Part Name | Fig. No. | Point | Note |
|---|---|---|---|---|
| [1] | Top cover | 1-3a | 4(S1a),(S1b),3(L1a), 2(SD1a),(P1a),(W1a), CN1(WR1a), | <Note 1a> |
| | Bracket | | 2(S1c) | |
| | (1) | (2) | (3) | (4) (5) |

(1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order.
These numbers are also used as the identification (location) No. of parts Figures.
(2) Part name to be removed or installed.
(3) Fig. No. showing procedure or part location.
(4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
P= Spring, W= Washer, S= Screw, L= Locking tab, SD= Solder, CN**(WR**)= Remove the wire (WR**) from the connector (CN**).

**Note:**
- **The bracketed ( ) WR of the connector symbol are assigned nos. in priority order and do not correspond to those on the spare parts list.**

(5) Adjustment information for installation

### 2.2.2 Disassembly procedure

| Step/ Loc No. | Part Name | Fig. No. | Point | Note |
|---|---|---|---|---|
| [1] | Top cover | 2-2-2d | 4(S1a),(S1b) | |
| [2] | Front panel assembly | 2-2-2d 2-2-2a | 2(S2a), 6(L2a), 3(L2b) | <Note 2a> |
| [3] | Mechanism assembly | 2-2-2d | CN2001(WR3a), (S3a), (S3b) | <Note 3a> <Note 3b> |
| | (Drum assembly) | 2-2-2b 2-2-2c | CN1(WR3b), (S3c), (S3d), (S3e), | <Note 3c> <Note 3d> |
| | (Inertia plate) | | 4(L3a) | |
| | (Roller arm assembly) | | (P3a),(L3b) | |
| [4] | [HR-S5965EF] S-P Converter board assembly | 2-2-2d | CN1601(WR4a) 2(S4a),(L4a) | |
| [5] | Main board assembly | 2-2-2d | (S5a), 3(S5b),6(L5a) | |
| [6] | Bottom cover | 2-2-2d | 3(L6a), 5(L6b), 2(L6c) | |

**<Note 2a>**
- When reattaching the Front panel assembly, make sure that the door opener of the Side frame (R) is lowered in position prior to the reinstallation.
- When reattaching the Front panel assembly, pay careful attention to the switch lever of the Front panel assembly not to make it touch the switch knob of the Main board assembly from the side.
- When reattaching the Front panel assembly, lift the Cassette door slightly.

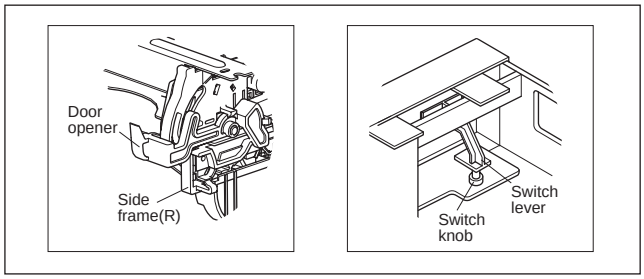


Fig.2-2-2a

**<Note 3a>**
- Be careful not to damage the connector and wire etc. during connection and disconnection.
- When connecting the flat wire to the connector, be careful with the flat wire direction.

**<Note 3b>**
- When reattaching the Mechanism assembly, secure the screws (S3a to S3b) in the order of a, b.

**<Note 3c>**
- When reattaching the Mechanism assembly, be sure to align the phase of the Rotary encoder on the Main board assembly.
- When reattaching the Mechanism assembly, set the “Mechanism assembling mode”. [See “MECHANISM ASSEMBLY SERVICE MANUAL (No. 86700)”.]
- When reattaching the Mechanism assembly to the Main board assembly, take care not to damage the sensors and switch on the Main board assembly.

**<Note 3d>**
- When reattaching the Drum assembly, secure the screws (S3c to S3e) in the order of c, d, e.

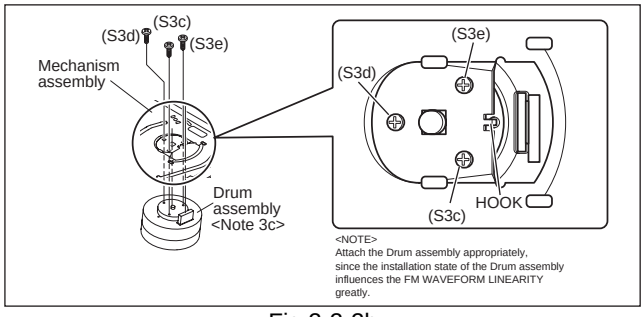


Fig.2-2-2b

- When handling the drum assembly alone, hold it by the motor or shaft. Be careful not to touch other parts, especially the video heads. Also take care not to damage the connectors.

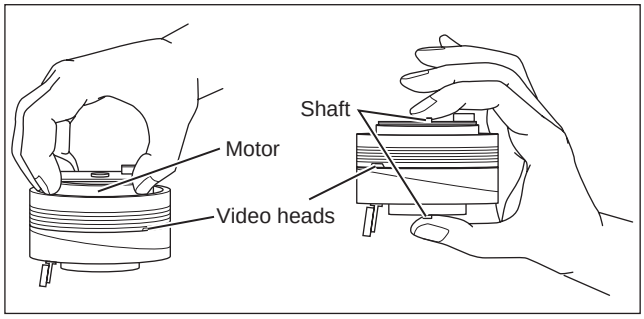


Fig.2-2-2c

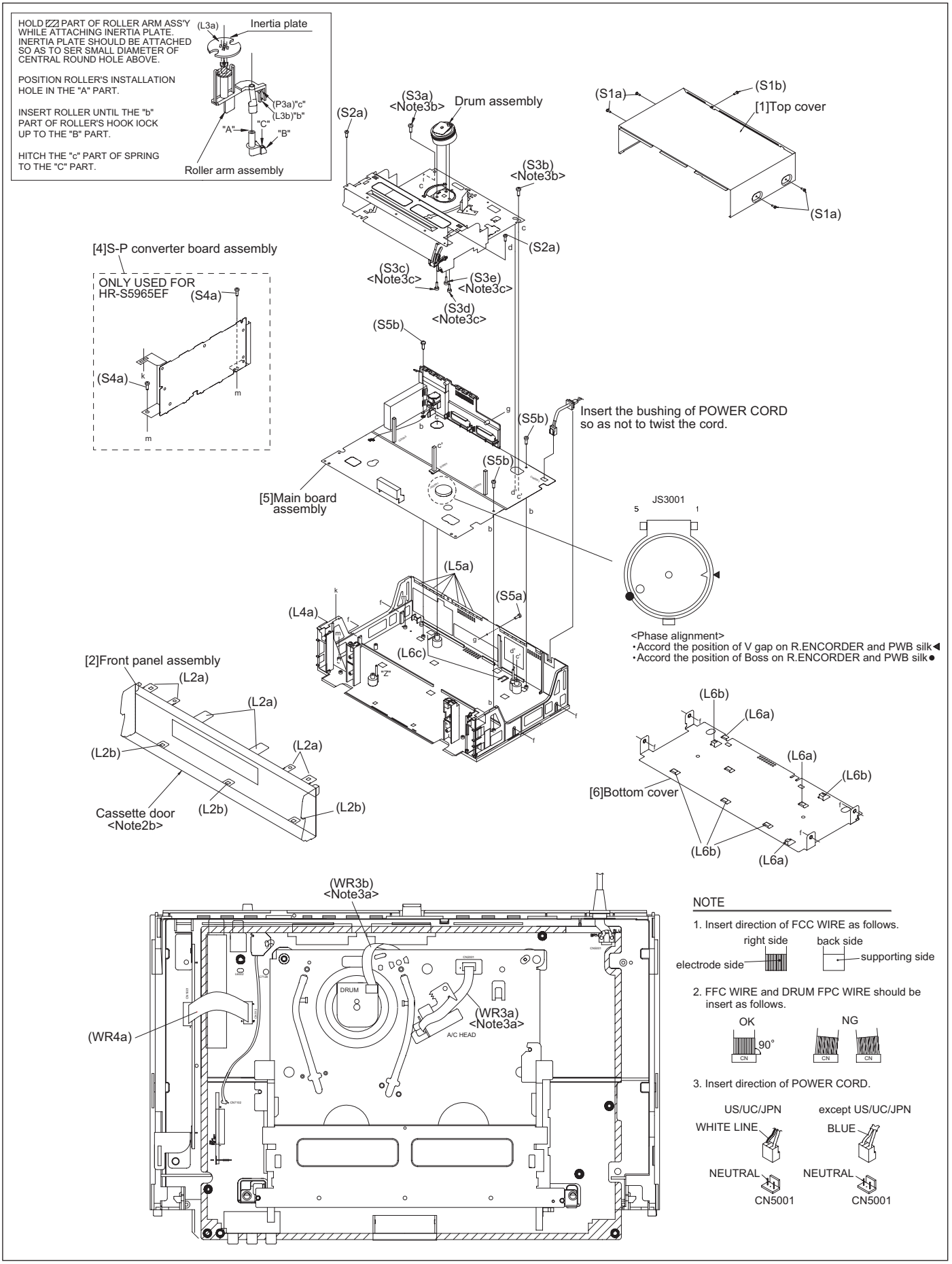

HOLD ▨ PART OF ROLLER ARM ASS'Y WHILE ATTACHING INERTIA PLATE.
INERTIA PLATE SHOULD BE ATTACHED SO AS TO SER SMALL DIAMETER OF CENTRAL ROUND HOLE ABOVE.
POSITION ROLLER'S INSTALLATION HOLE IN THE "A" PART.
INSERT ROLLER UNTIL THE "b" PART OF ROLLER'S HOOK IOCK UP TO THE "B" PART.
HITCH THE "c" PART OF SPRING TO THE "C" PART.
(L3a)
Inertia plate
(P3a)"c"
(L3b)"b"
"A"
"C"
"B"
Roller arm assembly
(S3a)
<Note3b>
Drum assembly
(S2a)
(S3b)
<Note3b>
(S1a)
(S1b)
[1]Top cover
(S1a)
(S2a)
[4]S-P converter board assembly
ONLY USED FOR HR-S5965EF
(S4a)
(S4a)
(S3c)
<Note3c>
(S3e)
<Note3c>
(S3d)
<Note3c>
(S5b)
(S5b)
Insert the bushing of POWER CORD so as not to twist the cord.
(S5b)
[5]Main board assembly
JS3001
5
1
(L5a)
(S5a)
(L4a)
(L6c)
<Phase alignment>
・Accord the position of V gap on R.ENCORDER and PWB silk◀
・Accord the position of Boss on R.ENCORDER and PWB silk●
[2]Front panel assembly
(L2a)
(L2a)
(L2a)
(L2b)
Cassette door
<Note2b>
(L2b)
(L2b)
(L6b)
(L6a)
(L6a)
(L6b)
[6]Bottom cover
(L6b)
(L6a)
(WR3b)
<Note3a>
(WR4a)
DRUM
(WR3a)
<Note3a>
A/C HEAD
NOTE
1. Insert direction of FCC WIRE as follows.
right side
back side
electrode side
supporting side
2. FFC WIRE and DRUM FPC WIRE should be insert as follows.
OK
NG
90°
CN
CN
CN
3. Insert direction of POWER CORD.
US/UC/JPN
except US/UC/JPN
WHITE LINE
BLUE
NEUTRAL
NEUTRAL
CN5001
CN5001

Fig.2-2-2d

## 2.3 Emergency display function

This unit saves details of the last two emergencies as the EMG history and allows the status of the VCR and the mechanism of each emergency to be shown both on the display and as OSD information.
When using the emergency function, it is required to set the VCR to the Jig RCU mode (Refer to 2.5 Jig RCU mode).

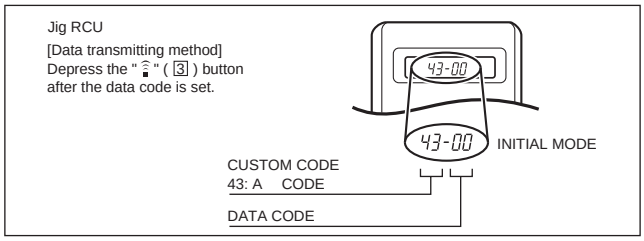


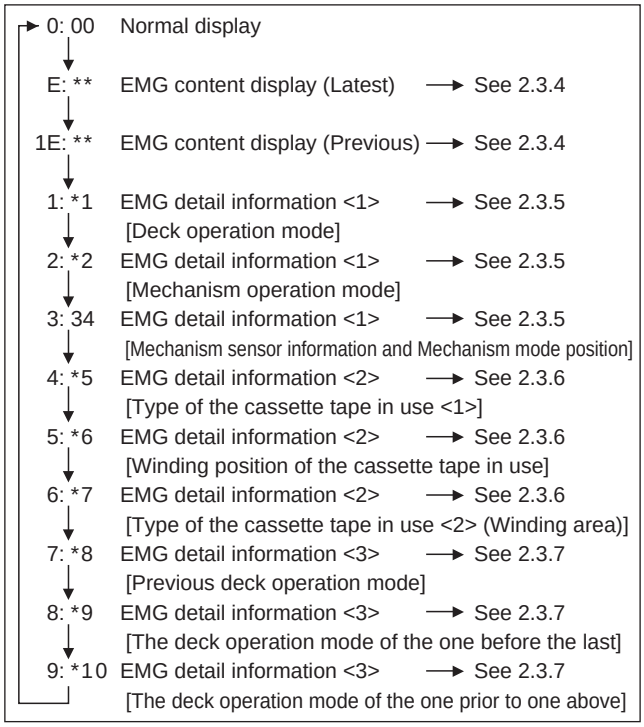

Fig.2-3a

### 2.3.1 Displaying the EMG information

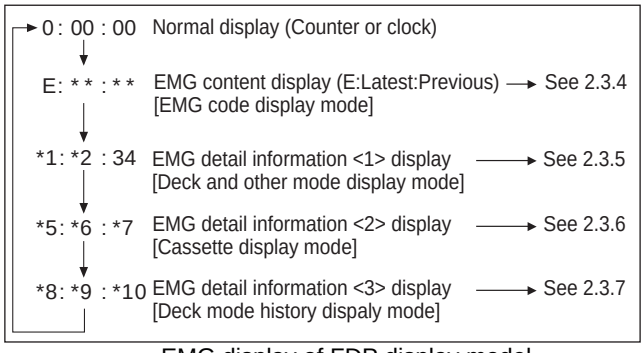
The EMG detail of information can be displayed by transmitting the code "59" from the Jig RCU.

**Note:**

- **The EMG detail information <1><2> show the information on the latest EMG.**
  **It becomes " – – : – – : – –" when there is no latest EMG record.**


0: 00 Normal display
E: ** EMG content display (Latest) → See 2.3.4
1E: ** EMG content display (Previous) → See 2.3.4
1: *1 EMG detail information <1> → See 2.3.5
[Deck operation mode]
2: *2 EMG detail information <1> → See 2.3.5
[Mechanism operation mode]
3: 34 EMG detail information <1> → See 2.3.5
[Mechanism sensor information and Mechanism mode position]
4: *5 EMG detail information <2> → See 2.3.6
[Type of the cassette tape in use <1>]
5: *6 EMG detail information <2> → See 2.3.6
[Winding position of the cassette tape in use]
6: *7 EMG detail information <2> → See 2.3.6
[Type of the cassette tape in use <2> (Winding area)]
7: *8 EMG detail information <3> → See 2.3.7
[Previous deck operation mode]
8: *9 EMG detail information <3> → See 2.3.7
[The deck operation mode of the one before the last]
9: *10 EMG detail information <3> → See 2.3.7
[The deck operation mode of the one prior to one above]

EMG display of 7segment LED display model
Fig.2-3-1b


0 : 00 : 00 Normal display (Counter or clock)
E: * * : * * EMG content display (E:Latest:Previous) → See 2.3.4
[EMG code display mode]
*1: *2 : 34 EMG detail information <1> display → See 2.3.5
[Deck and other mode display mode]
*5: *6 : *7 EMG detail information <2> display → See 2.3.6
[Cassette display mode]
*8: *9 : *10 EMG detail information <3> display → See 2.3.7
[Deck mode history dispaly mode]

EMG display of FDP display model
Fig.2-3-1c

**<Reference> EMG display of FDP display mode**

(1) Transmit the code "59" from the Jig RCU.
The FDP shows the EMG content in the form of "E:**:**".

<Example 1> E : 01 : 03
Previous EMG
Latest EMG

<Example 2> E : - - : - - ← No EMG record

(2) Transmit the code "59" from the Jig RCU again.
The FDP shows the EMG detail information <1> in the form of " *1: *2 : 34 ".

*1 : Deck operation mode at the moment of EMG
*2 : Mechanism operation mode at the moment of EMG
3– : Mechanism sensor information at the moment of EMG
–4 : Mechanism mode position at the moment of EMG

(3) Transmit the code "59" from the Jig RCU once again.
The FDP shows the EMG detail information <2> in the form of " *5 : *6 : *7 ".

*5 : Type of the cassette tape in use <1> .
*6 : Winding position of the cassette tape in use
*7 : Type of the cassette tape in use <2> (Winding area)

(4) Transmit the code "59" from the Jig RCU once again.
The FDP shows the EMG detail information <3> in the form of "*8 : *9 : *10".

*8 : Previous deck operation mode at the moment of EMG
*9 : The deck operation mode of the one before the last at the moment of EMG
*10: The deck operation mode of the one prior to one above at the moment of EMG

(5) Transmit the code "59" from the Jig RCU once again to reset the display.

### 2.3.2 Clearing the EMG history

(1) Display the EMG history.
(2) Transmit the code “36” from the Jig RCU.
(3) Reset the EMG display.

### 2.3.3 Details of the OSD display in the EMG display mode

During the EMG display, the OSD shows the data on the deck mode, etc. The details of the display contents are as follows.

**Notes:**

- **The display is variable depending on the part No. of the System Control microcomputer (IC3001) built into the VCR. In the following, refer to the figure carrying the same two characters as the top two characters of the part number of your IC.**
- **The sensor information in the OSD display contents is partially different from the mechanism sensor information in EMG detail information <1>.**

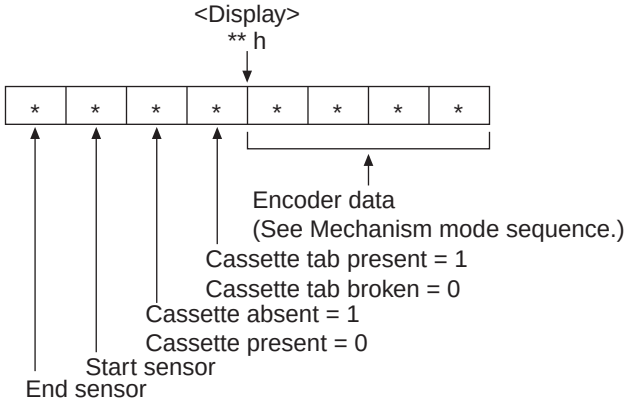
**[For MN* only]**

| | | | | |
|---|---|---|---|---|
| AA | BB | CC | DD | EE |
| FF | GG | HH | I I | J J |
| KK | L L | MM | NN | OO |
| PP | QQ | RR | SS | TT |
| UU | VV | WW | XX | YY |

AA : Deck operation mode (See EMG detail information <1>.)
BB : Mechanism operation mode (See EMG detail of information <1>.)
CC : Mechanism transition flag
DD : Capstan motor control status
EE : Loading motor control status
FF : Sensor information (See sensor information details.)
GG : Capstan motor speed
HH : Key code (JVC code)
I I : Supply reel winding diameter data, higher 8 bits.
JJ : Supply reel winding diameter data, lower 8 bits.
KK : Mechanism sensor information & mechanism mode position(See EMG detail of information <1>.)
LL : Tape speed data, higher 8 bits.
MM : Tape speed data, lower 8 bits.
NN : Cassette tape type <2>, higher 8 bits. (See EMG detail of information <2>.)
OO : Cassette tape type <2>, lower 8 bits. (See EMG detail of information <2>.)
PP : General data display area

YY: General data display area

***FF:Sensor information details**

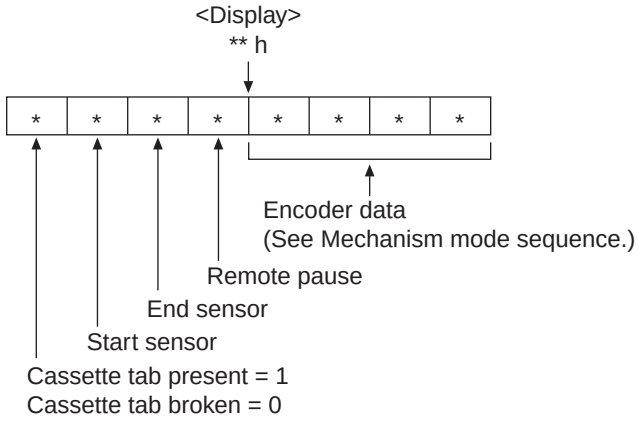



**[For *HD only]**

| | | |
|---|---|---|
| AA | BB | CC |
| DD | EE | FF |
| GGGG | HHHH | |
| I I | J J J J | |
| KKKK | L L L L | MMMM |
| ROM No. | | |

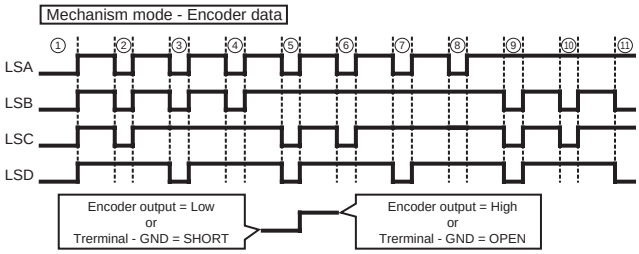
AA : Key code (JVC code)
BB : Deck operation mode(See EMG detail information <1>.)
CC : Mechanism operation mode (See EMG detail information <1>.)
DD : Sensor information (See sensor information details.)
EE : Capstan motor speed (Search, double speed)
FF : Tracking value
GGGG : Cassette tape type <2>, 16 bits. (See EMG detail information <2>.)
HHHH : Supply reel winding diameter data
I I : Capstan motor speed (FF/REW, double speed)
JJJJ : Tape speed data, lower 8 bits.
KKKK : General data display area
LLLL : General data display area
MMMM : General data display area

***DD:Sensor information details**

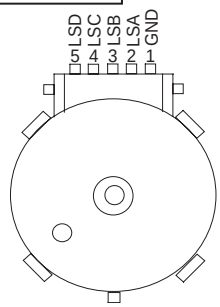



**[For both MN*/HD*]**

Mechanism mode sequence




| No. | Position | Encoder data |
|---|---|---|
| ① | EJECT | 0 h = 0000 |
| ② | EJECT1 | 1 h = 0001 |
| ③ | EJECT2 | 2 h = 0010 |
| ④ | ULSTOP | 3 h = 0011 |
| ⑤ | UPPER | 4 h = 0100 |
| ⑥ | ONSTOP(PLAY) | 5 h = 0101 |
| ⑦ | FWD/SS | 6 h = 0110 |
| ⑧ | REV/SS | 7 h = 0111 |
| ⑨ | OFFSTOP | 8 h = 1000 |
| ⑩ | FFREW-BRAKE | 9 h = 1001 |
| ⑪ | FFREW | A h = 1010 |
| ⑫ | MIDDLE | F h = 1111 |



### 2.3.4 EMG content description

**Note:**

**EMG contents “E08/E09” are for the model with Dynamic Drum (DD).**

| FDP | CONTENT | CAUSE |
|---|---|---|
| E01: Loading EMG | If the mechanism mode does not change to the next mode within 4 seconds after the loading motor starts rotating in the loading direction, while the mechanism is in the after-loading position (with the tape up against the pole base), [E:01] is identified and the power is switched OFF. However, if the tape loading is not completed within 4 seconds after the loading motor starts rotating in the loading direction, the tape is simply unloaded and ejected. No EMG data is recorded in this case. | 1. The mechanism is locked in the middle of the mode transition during a tape loading operation.<br>2. The mechanism overruns during the tape loading operation because the SYSCON cannot recognize the mechanism mode normally. This problem is due to a cause such as a rotary encoder failure.<br>3. Power is not supplied to the loading MDA. (M12V/Vcc/Vref/ICP are disconnected in the middle.) |
| E02: Unloading EMG | When the mechanism mode cannot be changed to another mode even when the loading motor has rotated for more than 4 seconds in the unloading direction, [E:02] is identified and the power is turned off. | 1. The mechanism is locked in the middle of mode transition.<br>2. Without an eject signal being sent from the SYSCON, unloading is attempted (i.e. Ejection is attempted while the tape is still inside the mechanism.) because the SYSCON cannot recognize the mechanism mode normally. This is due to a cause such as a rotary encoder failure. (Mechanism position: UPPER)<br>3. Power is not supplied to the loading MDA. (M12V/Vcc/Vref/ICP are disconnected in the middle.) |
| E03: Take Up Reel Pulse EMG | When the falling edje of the take-up reel pulse has not been generated for more than 4 seconds in the capstan rotating mode, [E:03] is identified, the pinch rollers are turned off and stopped, and the power is turned off. In this case, however, the mechanism should be in position after tape loading. Note that the reel EMG is not detected during Slow/Frame advance operations. | 1. The take-up reel pulse is not generated in the FWD transport modes (PLAY/FWD SEARCH/FF, etc.) because;<br>1) The idler gear is not meshed with the take-up reel gear because the mechanism mal-functions for some reason.<br>2) The idler gear is meshed with the take-up reel gear, but incapable of winding due to too large mechanical load (abnormal tension);<br>3) The reel is rotating normally but an FG pulse is not generated due to the take-up reel sensor failure.<br>2. The supply reel pulse is not generated in the REV transport modes (REV SEARCH/REW, etc.) because;<br>1) The idler gear is not meshed with the supply reel gear because the mechanism mal-functions for some reason.<br>2) The idler gear is meshed with the supply reel gear, but incapable of winding due to too large a mechanical load (abnormal tension);<br>3) The reel rotates normally but the FG pulse is not generated due to a supply reel sensor failure.<br>3. Power(SW5V) is not supplied to the reel sensor on the tape winding side. |
| E04: Drum FG EMG | When the drum FG pulse has not been input for more than 3 seconds in the drum rotating mode, [E:04] is identified, the pinch rollers are turned off and stopped, and the power is turned off. | 1. The drum could not start or the drum rotation has stopped due to too large a load on the tape, because;<br>1) The tape tension is abnormally high;<br>2) The tape is damaged or a foreign object (grease, etc.) adheres to the tape.<br>2. The drum FG pulse did not reach the System controller CPU because;<br>1) The signal circuit is disconnected in the middle;<br>2) The FG pulse generator (hall device) of the drum is faulty.<br>3. The drum control voltage (DRUM CTL V) is not supplied to the MDA.<br>4. Power (M12V) is not supplied to the drum MDA. |
| E05: Cassette Eject EMG | If the cassette does not reach the eject position within about 0.7 seconds after the cassette housing has started the cassette ejection operation, [E:05] is identified, the drive direction is reversed to load the tape, the mode is switched to STOP mode with the pinch roller OFF, and the power is switched OFF.<br>During the cassette insertion process, the drive direction is reversed and the cassette is ejected if the tape is not up against the pole base within about 3 seconds after the start of the cassette pulling-in operation. If the cassette does not reach the eject position within about 0.7 seconds after the drive mode reversal operation, [E:05] is identified and the power is switched OFF immediately. | 1. The cassette cannot be ejected due to a failure in the drive mechanism of the housing.<br>2. When the housing load increases during ejection, the loading motor is stopped because of lack of headroom in its drive torque.<br>Housing load increasing factors: Temperature environment (low temperature, etc.), mechanism wear or failure.<br>3. The sensor/switch for detecting the end of ejection are not functioning normally.<br>4. The loading motor drive voltage is lower than specified or power (M12V) is not supplied to the motor (MDA).<br>5. When the user attempted to eject a cassette, a foreign object (or perhaps the user's hand) was caught in the opening of the housing. |
| E06: Capstan FG EMG | When the capstan FG pulse has not been generated for more than 1 second in the capstan rotating mode, [E:06] is identified, the pinch rollers are turned off and stopped, and the power is turned off.However, the capstan EMG is not detected in SLOW/STILL modes.<br>Note that, if the part number of the System Control IC begins with "MN" or "M3", the capstan EMG is not detected even during the FF/REW operation. | 1. The capstan could not start or the capstan rotation has stopped due to too large a load on the tape, because;<br>1) The tape tension is abnormally high (mechanical lock);<br>2) The tape is damaged or a foreign object (grease, etc.) is adhered to the tape (occurrence of tape entangling, etc.).<br>2. The capstan FG pulse did not reach the System controller CPU because;<br>1) The signal circuit is disconnected in the middle;<br>2) The FG pulse generator (MR device) of the capstans is faulty.<br>3. The capstan control voltage (CAPSTAN CTL V) is not supplied to the MDA.<br>4. Power (M12V, SW5V) are not supplied to the capstan MDA. |
| E07: SW Power Short-Circuit EMG | When short-circuiting of the SW power supply with GND has lasted for 0.5 second or more, [E:07] is identified, all the motors are stopped and the power is turned off. | 1. The SW 5 V power supply circuit is shorted with GND.<br>2. The SW 12 V power supply circuit is shorted with GND. |
| E08: DD Initialized (Absolute Position Sensor) EMG | When DD tilting does not complete in 4 seconds, [E:08] is identified, the tilt motor is stopped and the power is turned off. | 1. The absolute value sensor is defective. (The soldered parts have separated.)<br>2. The pull-up resistor at the absolute sensor output is defective. (The soldered parts have separated.)<br>3. Contact failure or soldering failure of the pins of the connector (board-to-board) to the absolute value sensor.<br>4. The absolute value sensor data is not sent to the System Controller CPU. |
| E09: DD FG EMG | When the DD FG pulse is not generated within 2.5 seconds, [E:09] is identified, the tilt motor is stopped and the power is turned off. | 1. The FG sensor is defective. (The soldered parts have separated.)<br>2. The pull-up resistor at the FG sensor output is defective. (The soldered parts have separated.)<br>3. Contact failure or soldering failure of the pins of the connector (board-to-board) to the FG sensor.<br>4. The power (5V) to the sensor is not supplied. (Connection failure/soldering failure)<br>5. The FG pulse is not sent to the System Controller CPU.<br>6. The tilt motor is defective. (The soldered parts have separated.)<br>7. The drive power to the tilt motor is not supplied. (Connection failure/soldering failure)<br>8. The tilt motor drive MDA - IC is defective.<br>9. Auto-recovery of the DD tilting cannot take place due to overrun. |
| E0A: Supply Reel Pulse EMG | When the falling edge of the supply reel pulse has not been generated for more than 10 seconds in the capstan rotating mode, [E:0A] is identified and the cassette is ejected (but the power is not turned off). In this case, however, the mechanism should be in the position after tape loading (with the tape up against the pole base). Also note that the reel EMG is not detected during Slow/Frame advance operations. | 1. The supply reel pulse is not generated in the FWD transport mode (PLAY/FWD SEARCH/FF, etc.) because;<br>1) PLAY/FWD or SEARCH/FF is started while the tape in the inserted cassette is cut in the middle;<br>2) A mechanical factor caused tape slack inside and outside the supply reel side of the cassette shell. In this case, the supply reel will not rotate until the tape slack is removed by the FWD transport, so the pulse is not generated until then;<br>3) The reel is rotating normally but the FG pulse is not generated due to a supply reel sensor failure.<br>2. The take-up reel pulse is not generated in the REV transport mode (REV SEARCH/REW, etc.).<br>1) REV SEARCH/REW is started when the tape in the inserted cassette has been cut in the middle;<br>2) A mechanical factor caused tape slack inside and outside the take-up reel side of the cassette shell. In this case, the take up will not rotate until the tape slack is removed by the REV transport, so the pulse will not be generated until that time;<br>3) The reel is rotating normally but the FG pulse is not generated due to a take-up reel sensor failure.<br>3. The power (SW 5V) to a reel sensor is not supplied. |
| EU1: Head clog warning history | Presupposing the presence of the control pulse output in the PLAY mode, when the value obtained by mixing the two V.FM output channels (without regard to the A.FM output) has remained below a certain threshold level for more than 10 seconds, [E:U1] is identified and recorded in the emergency history. During the period in which the head clog is detected, the FDP shows "U:01" and the OSD repeats the "3 seconds of warning display" and the "7 seconds of noise picture display" alternately.<br>EMG code : "E:C1" or "E:U1" / FDP : "U:01" / OSD : "Try cleaning tape." or "Use cleaning cassette."<br>The head clog warning is reset when the above-mentioned threshold has been exceeded for more than 2 seconds or the mode is changed to another mode than PLAY. | |

### 2.3.5 EMG detail information <1>

The status (electrical operation mode) of the VCR and the status (mechanism operation mode/sensor information) of the mechanism in the latest EMG can be confirmed based on the figure in EMG detail information <1> .

**[FDP/OSD display]** *1 : *2 : 34

*1 : Deck operation mode at the moment of EMG
*2 : Mechanism operation mode at the moment of EMG
3– : Mechanism sensor information at the moment of EMG
–4 : Mechanism mode position at the moment of EMG

**Note:**

- **For EMG detailed information <1>, the content of the code that is shown on the display (or OSD) differs depending on the parts number of the system control microprocessor (IC3001) of the VCR. The system control microprocessor parts number starts with two letters, refer these to the corresponding table.**

***1 : Deck operation mode**

[Common table of MN* and HD]

| Display | | Deck operation mode |
|---|---|---|
| MN* | HD* | |
| 00 | - | Mechanism being initialized |
| 01 | 00 | STOP with pinch roller pressure off (or tape present with P.OFF) |
| 02 | 01 | STOP with pinch roller pressure on |
| 03 | - | POWER OFF as a result of EMG |
| 04 | 04 | PLAY (Normal playback) |
| 0C | 0E | REC |
| 10 | 11 | Cassette ejected |
| 20 | 22 | FF |
| 21 | - | Tape fully loaded, START sensor ON, short FF |
| 22 | - | Cassette identification FWD SEARCH before transition to FF (SPx7-speed) |
| 24 | 26 | FWD SEARCH (variable speed) including x2-speed |
| 2C | 2E | INSERT REC |
| 40 | 43 | REW |
| 42 | - | Cassette identification REV SEARCH before transition to REW (SPx7-speed) |
| 44 | 47 | REV SEARCH (variable speed) |
| 4C | 4C | AUDIO DUB |
| 6C | 6E | INSERT REC (VIDEO + AUDIO) |
| 84 | 84 | FWD STILL / SLOW |
| 85 | 85 | REV STILL / SLOW |
| 8C | 8F | REC PAUSE |
| 8D | - | Back spacing |
| 8E | - | Forward spacing (FWD transport mode with BEST function) |
| AC | AF | INSERT REC PAUSE |
| AD | - | INSERT REC back spacing |
| CC | CD | AUDIO DUB PAUSE |
| CD | - | AUDIO DUB back spacing |
| EC | EF | INSERT REC (VIDEO + AUDIO) PAUSE |
| ED | - | INSERT REC (VIDEO + AUDIO) back spacing |

***2 : Mechanism operation mode**

[Table of MN*]

| Display | Mechanism operation mode |
|---|---|
| 00 | Command standby (No command to be executed) |
| 01 | Immediate Power OFF after EMG occurrence |
| 02 | Loading from an intermediate position during mechanism initialization |
| 03 | Unloading due to EMG occurrence during mechanism initialization |
| 04 | Ejecting cassette (ULSTOP to EJECT) |
| 05 | Inserting cassette (EJECT to ULSTOP) |
| 06 | Loading tape (ULSTOP to PLAY) |
| 07 | Unloading tape (PLAY to ULSTOP) |
| 08 | Transition from pinch roller ON to STOP |
| 09 | Transition from pinch roller OFF to STOP (PLAY to OFFSTOP) |
| 0A | Transition from pinch roller OFF to STOP at power OFF |
| 0B | Transition from pinch roller ON to STOP at power ON |
| 0C | Transition to PLAY |
| 0D | Transition to Search FF |
| 0E | Transition to REC |
| 0F | Transition to FWD STILL/SLOW |
| 10 | Transition to REV STILL/SLOW |
| 11 | Transition to Search REV |
| 12 | Transition from FF/REW to STOP |
| 13 | Transition to FF |
| 14 | Transition to REW |
| 15 | Tape end detection processing during loading |
| 16 | Short FWD/REV at tape sensor ON during unloading |
| 17 | Transition to FF/REW brake mode |

[Table of HD*]

| Display | Mechanism operation mode |
|---|---|
| 00 | STOP with pinch roller pressure off |
| 01 | STOP with pinch roller pressure on |
| 02 | U/L STOP (or tape being loaded) |
| 04 | PLAY (Normal playback) |
| 05 | PLAY (x1-speed playback using JOG) |
| 0E | REC |
| 11 | Cassette ejected |
| 22 | FF |
| 26 | FWD SEARCH (variable speed) including x2-speed |
| 2E | INSERT REC |
| 43 | REW |
| 47 | REV SEARCH |
| 4C | AUDIO DUB |
| 6E | INSERT REC (VIDEO + AUDIO) |
| 84 | FWD STILL/SLOW |
| 85 | REV STILL/SLOW |
| 8F | REC PAUSE |
| AF | INSERT REC PAUSE |
| C7 | REV SEARCH (x1-speed reverse playback using JOG) |
| CD | AUDIO DUB PAUSE |
| EF | INSERT REC (VIDEO + AUDIO) PAUSE |
| F0 | Mechanism being initialized |
| F1 | POWER OFF as a result of EMG |
| F2 | Cassette being inserted |
| F3 | Cassette being ejected |
| F4 | Transition from STOP with pinch roller pressure on to STOP with pinch roller pressure off |
| F5 | Transition from STOP with pinch roller pressure on to PLAY |
| F6 | Transition from STOP with pinch roller pressure on to REC |
| F7 | Cassette type detection SEARCH before FF/REW is being executed |
| F8 | Tape being unloaded |
| F9 | Transition from STOP with pinch roller pressure off to STOP with pinch roller pressure on |
| FA | Transition from STOP with pinch roller pressure off to FF/REW |
| FB | Transition from STOP with pinch roller pressure off to REC.P (T.REC,etc.) |
| FC | Transition from STOP with pinch roller pressure off to cassette type detection SEARCH |
| FD | Short REV being executed after END sensor on during unloading |
| FE | Tension loosening being executed after tape loading (STOP with pinch roller pressure on) |
| FF | Tape being unloaded |

**3- : Mechanism sensor information**

[Common table of MN* and HD*]

| Display | Mechanism sensor informatio n | | | |
|---|---|---|---|---|
| | REC safety SW | Start sensor | End sensor | Mechansim position sensor |
| 0- | Tab broken | ON | ON | ON |
| 1- | Tab broken | ON | ON | OFF |
| 2- | Tab broken | ON | OFF | ON |
| 3- | Tab broken | ON | OFF | OFF |
| 4- | Tab present | OFF | ON | ON |
| 5- | Tab present | OFF | ON | OFF |
| 6- | Tab present | OFF | OFF | ON |
| 7- | Tab present | OFF | OFF | OFF |
| 8- | Tab broken | ON | ON | ON |
| 9- | Tab broken | ON | ON | OFF |
| A- | Tab broken | ON | OFF | ON |
| B- | Tab broken | ON | OFF | OFF |
| C- | Tab present | OFF | ON | ON |
| D- | Tab present | OFF | ON | OFF |
| E- | Tab present | OFF | OFF | ON |
| F- | Tab present | OFF | OFF | OFF |
| | Tab broken = 0<br>Tab present = 1 | Sensor ON = 0<br>sensor OFF = 1 | Sensor ON = 0<br>Sensor OFF = 1 | |

**-4 : Mechanism mode position**

[Common table of MN* and HD*]

| Mechanism sensor information | Dis-play | Deck operation mode | |
|---|---|---|---|
| Even number (0, 2, 4, 6, 8, A, C, E) | -0 | Not established | |
| | -1 | EJECT | EJECT position |
| | -2 | EJECT-EJECT1 | Intermodal position |
| | -3 | EJECT1 | EJECT1 position |
| | -4 | EJECT1-EJECT2 | Intermodal position |
| | -5 | EJECT2 | EJECT2 position |
| | -6 | EJECT2-ULSTOP | Intermodal position |
| | -7 | ULSTOP | ULSTOP position |
| | -8 | ULSTOP-UPPER | Intermodal position |
| | -9 | UPPER | Loading (unloading) tape |
| | -A | UPPER-ONSTOP | Intermodal position |
| | -B | ONSTOP | PLAY position |
| | -C | PLAY-FWD/SS | Intermodal position |
| | -D | FWD/SS | FWD (FWD Still/Slow) position |
| | -E | FWD/SS-REV | Intermodal position |
| | -F | REV | REV (REV Still/Slow) position |
| Odd number (1, 3, 5, 7, 9, B, D, F) | -0 | REV-OFFSTOP | Intermodal position |
| | -1 | OFFSTOP | Pinch roller OFF position |
| | -2 | OFFSTOP-FFREWB | Intermodal position |
| | -3 | FFREWB | FF/REW Brake position |
| | -4 | FFREWB-FFREW | Intermodal position |
| | -5 | FFREW | FF/REW position |

### 2.3.6 EMG detail information <2>

The type of the cassette tape and the cassette tape winding position can be confirmed based on the figure in EMG detail information <2> .

**Note:**

- **EMG detail information <2> is the reference information stored using the remaining tape detection function of the cassette tape. As a result, it may not identify cassette correctly when a special cassette tape is used or when the tape has variable thickness.**

***5 : Cassette tape type <1>**

| Display | Cassette tape type <1> |
|---|---|
| 00 | Cassette type not identified |
| 16 | Large reel/small reel (T-0 to T-15/T-130 to T-210) not classified |
| 82 | Small reel, thick tape (T-120) identified/thin tape (T-140) identified |
| 84 | Large reel (T-0 to T-60) identified |
| 92 | Small reel, thick tape (T-130) identified/thin tape (T-160 to T-210) identified |
| 93 | Small reel, thick tape/C cassette (T-0 to T-100/C cassette) not classified |
| C3 | Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified |
| D3 | Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified |
| E1 | C cassette, thick tape (TC-10 to TC-20) identified |
| E2 | Small reel, thick tape (T-0 to T-100) identified |
| E9 | C cassette, thin tape (TC-30 to TC-40) identified |
| F1 | C cassette, thick tape/thin tape (TC-10 to TC-40) not classified |

**Notes:**

- **Cassette tape type <1> is identified a few times during mode transition and the identification count is variable depending on the cassette tape type. If an EMG occurs in the middle of identification, the cassette tape type may not be able to be identified.**
- **If other value than those listed in the above table is displayed, the cassette tape type is not identified.**

***6 : Cassette tape winding position**

The cassette tape winding position at the moment of EMG is displayed by dividing the entire tape (from the beginning to the end) in 21 sections using a hex number from “00” to “14”.

“00” : End of winding
“14” : Beginning of winding
“FF” : Tape position not identified

***7 : Cassette tape type <2> (Winding area)**

| Display | Cassette tape type <2> | | (Reference) Word data (Beginning) (End) |
|---|---|---|---|
| 00 | Cassette type not identified | | |
| 04 - 08 | C cassette, thick tape | TC-10 | (0497 - 0506) (0732 - 0858) |
| 05 - 06 | Small reel, thick tape | T-20 | (05A9 - 0661) |
| 05 - 0C | C cassette, thick tape | TC-20P | (0599 - 05FF) (0AA1 - 0C07) |
| 06 - 0C | C cassette, thin tape | TC-40 | (0623 - 063D) (0C41 - 0CC3) |
| 06 - 0C | C cassette, thin tape | TC-30 | (0611 - 0638) (0C0C - 0CB2) |
| 07 - 08 | Small reel, thick tape | T-40 | (07CC - 08E5) |
| 09 - 0B | Small reel, thick tape | T-60 | (09FD - 0B78) |
| 0C - 0D | Small reel, thick tape | T-80(DF-160) | (0C20 - 0DFC) |
| 0D - 0F | Small reel, thick tape | T-90(DF-180) | (0D31 - 0F3E) |
| 0E - 10 | Small reel, thick tape | T-100 | (0E43 - 107F) |
| 10 - 12 | Small reel, thin tape | T-140 | (10E1 - 120C) |
| 10 - 13 | Small reel, thick tape | T-120(DF-240) | (1073 - 1313) |
| 11 - 14 | Small reel, thick tape | T-130 | (1185 - 1429) |
| 12 - 14 | Small reel, thin tape | T-160 | (12D3 - 141F) |
| 13 - 14 | Small reel, thin tape | T-210(DF-420) | (1373 - 14C3) |
| 13 - 14 | Small reel, thin tape | T-180(DF-360) | (1357 - 14C0) |
| 13 - 14 | Small reel, thin tape | T-168 | (1395 - 14EE) |
| 13 - 14 | Small reel, thick tape | DF-300 | (13A8 - 14CE) |
| 15 - 16 | Large reel | T-20 | (1536 - 1618) |
| 16 - 17 | Large reel | T-30 | (1647 - 175A) |
| 17 - 18 | Large reel | T-40 | (1759 - 189C) |
| 19 - 1B | Large reel | T-60 | (1989 - 1B2F) |

**Note:**

- **The values of cassette tape type <2> in the above table are typical values with representative cassette tapes.**

### 2.3.7 EMG detail information <3>

Three deck operation modes preceding the deck operation mode in which the EMG occurs may be confirmed based on the figures in the EMG information detail <3>. For the contents of the displayed information, see the table "Deck operation mode" in section "2.3.6 EMG detail information <1>".

## 2.4 Service position

This unit has been designed so that the Mechanism and Main board assemblies can be removed together from the chassis assembly. Before diagnosing or servicing the circuit boards, take out the major parts from the chassis assembly.

### 2.4.1 How to set the "Service position"

(1) Refer to the disassembly procedure and perform the disassembly of the major parts before removing the Mechanism assembly.
(2) Remove the screws that fix the Mechanism assembly to the Chassis assembly. If any other screws are used to fix the boards, remove them also.
(3) Remove the combined Mechanism and Main board assemblies.
(4) If any other major parts are used, remove them also.
(5) Connect the wires and connectors of the major parts that have been removed in steps (1) to (4). (Refer to Fig. 2-4-1a.)
(6) Place the combined Mechanism, Main board and other board assemblies upside down.
(7) Insert the power cord plug into the power outlet and then proceed with the diagnostics and servicing of the board assembly.

**Notes:**

- **Before inserting the power cord plug into the power outlet, make sure that none of the electrical parts are able to short-circuit between the workbench and the board assembly.**
- **For the disassembly procedure of the major parts and details of the precautions to be taken, see "2.2 Removing the major parts".**
- **If there are wire connections from the Main board and Mechanism assemblies to the other major parts, be sure to remove them (including wires connected to the major parts) first before performing step (2).**
- **When carrying out diagnosis and repair of the Main board assembly in the "Service position", be sure to ground both the Main board and Mechanism assemblies. If they are improperly grounded, there may be noise on the playback picture or FDP counter display may move even when the mechanism is kept in an inoperative status.**
- **In order to diagnose the playback or recording of the cassette tape, set the Mechanism assembly to the required mode before placing it upside down. If the mechanism mode is changed (including ejection) while it is in an upside down position the tape inside may be damaged.**
- **For some models, the mechanism and board assemblies are attached by connectors only. When carrying out a diagnosis or repair of the boards in the "Service position", make sure that the connectors are not disconnected.**

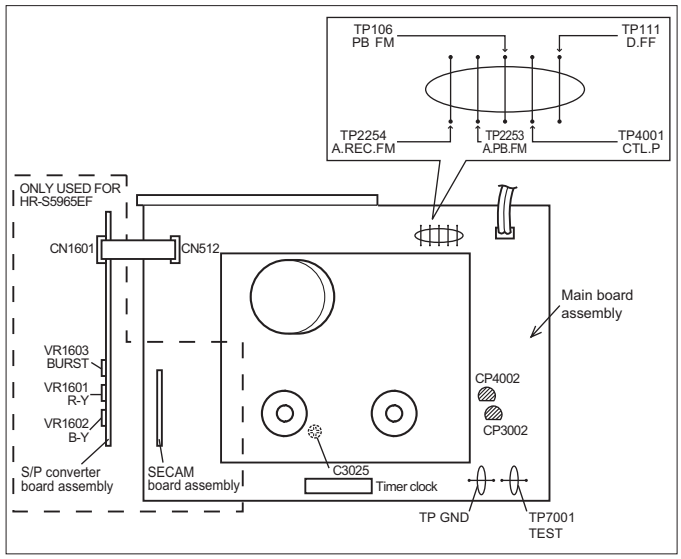



Fig.2-4-1a

## 2.5 Jig RCU mode

This unit uses the following two modes for receiving remote control codes.

(1) User RCU mode:Ordinary mode for use by the user.
(2) Jig RCU mode: Mode for use in production and servicing.

When using the Jig RCU, it is required to set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received). As both of the above two modes are stored in the EEPROM, it is required to set the VCR back to the User RCU mode each time that an adjustment is made or to check that the necessary operations have been completed.These modes can be set by the operations described below.

**Note:**

- **Confirm the RCU mode when exchanged parts. Since some SERVICE PARTS sets the VCR to the Jig RCU mode as initial setting.**

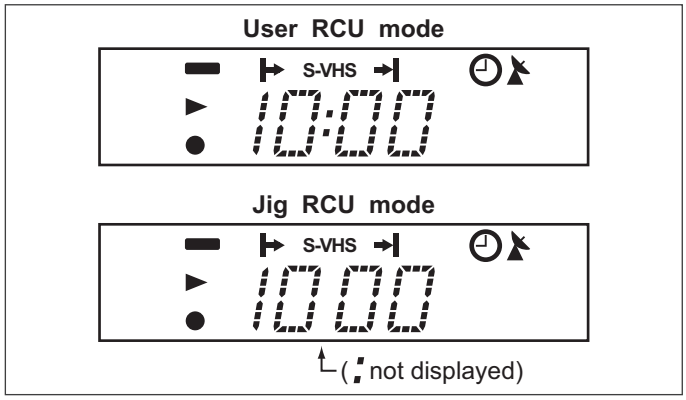



Fig.2-5-1a User/Jig RCU mode

### 2.5.1 Setting the Jig RCU mode

(1) Unplug the power cord plug from the power outlet.
(2) Press and hold the "REC" and "PAUSE" buttons on the VCR simultaneously, while plugging the power cord plug into the power outlet.
When the VCR is set to the Jig RCU mode, the symbols ( " : " ) in the time display of the FDP are turned off.
(Refer to Fig.2-5-1a)

### 2.5.2 Setting the User RCU mode

(1) Turn off the power.
(2) Press the “REC” and “PAUSE” buttons of the VCR simultaneously. Alternatively, transmit the code “80” from the Jig RCU.

## 2.6 Mechanism service mode

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the “Mechanism service mode”.

### 2.6.1 How to set the “Mechanism service mode”

(1) Set the VCR to the Jig RCU mode (the mode in which codes from the Jig RCU can be received)
(2) Transmit the code “E5” from the Jig RCU.
(3) Release the lug of the Cassette holder and then slide the Cassette holder toward the direction where the Cassette holder is loaded by manually.
(4) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.
When the VCR is set to the Mechanism service mode, the symbols (“Timer”) in the FDP (LED) are blinked.

### 2.6.2 How to exit from the "Mechanism service mode"

(1) Unplug the power cord plug from the power outlet.

## 2.7 Maintenance and inspection

### 2.7.1 Cleaning

out cleaning of the tape transport system whenever the machine is serviced.
When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

**Note:**

- **Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.**

(1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.
(2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.
(3) After cleaning, make sure that the cleaned parts are completely dry before using the cassette tape.

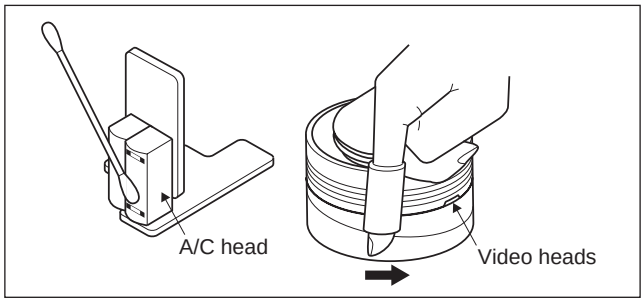



Fig.2-7-1a

### 2.7.2 Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

**Note:**

- **See the “mechanism assembly” diagram of the “parts list” for the lubricating or greasing spots, and for the types of oil or grease to be used.**

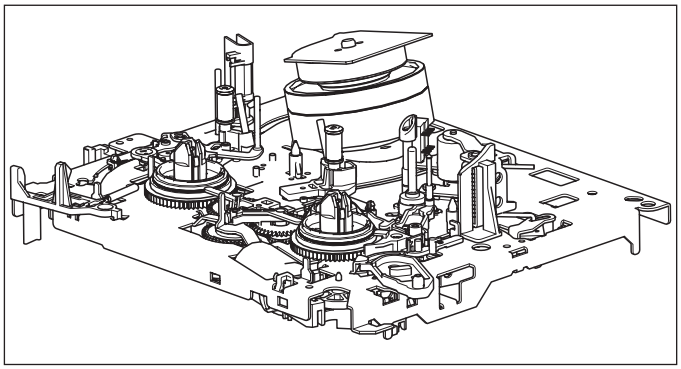
### 2.7.3 Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time, even if the set is not used.

| System | Parts name | Operation hours | |
|---|---|---|---|
| | | 1000H | 2000H |
| Tape transport | Drum assembly | C,X | X |
| | A/C head | C,X | C,X |
| | Pinch roller arm assembly | C | C |
| | Full erase head | C | C |
| | Tension arm assembly | C | C |
| | Capstan motor (Shaft) | C | C |
| | Guide arm assembly | C | C |
| Drive | Capstan motor | | X |
| | Capstan brake assembly | | X |
| | Main brake assembly | | X |
| | Belt (Capstan) | X | X |
| | Loading motor | | X |
| | Clutch unit | | X |
| | Worm gear | | X |
| | Control plate | | X |
| Other | Rotary encoder | | X |

C : Cleaning
X : Inspection or Replacement if necessary

**For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700 (MECHANISM ASSEMBLY).**



MECHANISM ASSEMBLY

# SECTION 3
# ADJUSTMENT

## 3.1 Before adjustment

### 3.1.1 Precaution

- **The adjustments of this unit include the mechanism compatibility and electrical adjustments. During the performance of this work, be sure to observe the precautions for each type of adjustment.**
- **If there is a reference to a signal input method in the signal column of the adjustment chart, "Ext. S-input" means the Y/C separated video signal and "Ext. input" means the composite video signal input.**
- **Unless otherwise specified, all measuring points and adjustment parts are located on the Main board.**

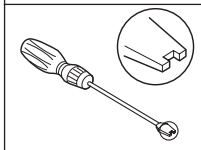
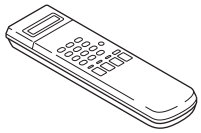
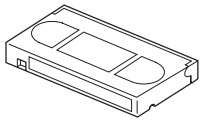
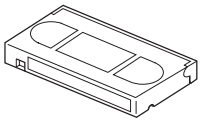
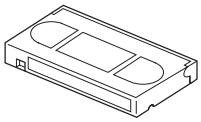
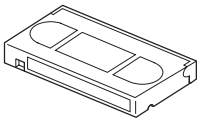
### 3.1.2 Required test equipments

- Color (colour) television or monitor
- Oscilloscope: wide-band, dual-trace, triggered delayed sweep
- Signal generator: RF / IF sweep / marker
- Signal generator: stairstep, color (colour) bar [PAL/SECAM]
- Recording tape
- Digit-key remote controller(provided)

### 3.1.3 Required adjustment tools

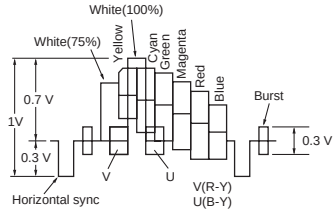
○ : Used --- : Not used

| | Mechanism compatibility adjustment | Electrical adjustment |
|---|---|---|
| Roller driver | ○ | --- |
| Jig RCU | --- | ○ |
| Back tension cassette gauge | ○ | --- |
| Alignment tape(MHPE) | ○ | --- |
| Alignment tape(MHPE-L) | ○ | ○ |
| Alignment tape(MHP-L) | --- | ○ |

| Roller driver PTU94002 | Jig RCU PTU94023B | Back tension cassette gauge PUJ48076-2 |
|---|---|---|
|  |  |  |
| Alignment tape (SP, stairstep, PAL) MHPE | Alignment tape (LP, stairstep, PAL) MHPE-L | Alignment tape (EP, stairstep, NTSC) MHP-L |
|  |  |  |

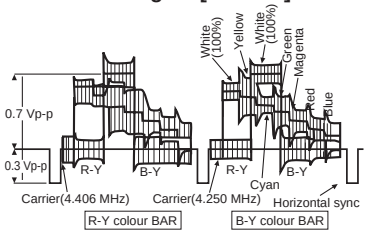
### 3.1.4 Color (colour) bar signal,Color (colour) bar pattern

**• Colour bar signal [PAL]**




**• Colour bar pattern [PAL]**

**• Colour bar signal [SECAM]**




**• Colour bar pattern [SECAM]**

### 3.1.5 Switch settings

When adjusting this unit, set the VCR mode and switches as described below.

- When using the Jig RCU, it is required to set the VCR to the Jig RCU mode. (Refer to 2.5 Jig RCU mode.)

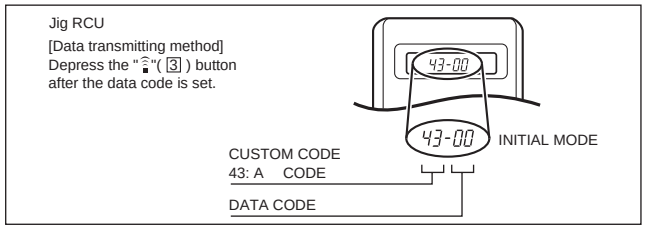



Fig.3-1-5a Jig RCU [PTU94023B]

- Set the switches as shown below unless otherwise specified on the relevant adjustment chart. The switches that are not listed below can be set as desired.
  If the VCR is not equipped with the functions detailed below, setup is not required.

| | |
|---|---|
| AUTO PICTURE/VIDEO CALIBRATION/ B.E.S.T./D.S.P.C. | OFF |
| PICTURE CONTROL/SMART PICTURE | NORMAL/NATURAL |
| VIDEO STABILIZER | OFF |
| TBC | ON |
| Digital 3R | ON |
| VIDEO NAVIGATION/TAPE MANAGER | OFF |
| BLUE BACK | OFF |

### 3.1.6 Manual tracking mode (Auto tracking ON/OFF) setting

(1) In order to set to the manual tracking mode during tape playback, press the "SP/EP(LP)"button on the remote control unit.
  - Each press of the button switches the auto tracking ON or OFF.
  - When the manual tracking mode is set, the tracking is placed at the center position.

(2) Press "channel +/-" to adjust the tracking manually.

### 3.1.7 EVR Adjustment

Some of the electrical adjustments require the adjustment performed by the EVR system. The main unit have EEPROMs for storing the EVR adjustment data and user setups.

**Notes:**

- **In the EVR adjustment mode, the value is varied with the channel buttons (+, –). The adjusted data is stored when the setting mode changes (from PB to STOP, when the tape speed is changed, etc.). Take care to identify the current mode of each adjustment item when making an adjustment.**
- **When changing the address setting in the EVR adjustment mode, use the Jig RCU or the remote controller having numeric keypad with which a numeric code can be directly input.**
  **The remote control code of the Jig RCU corresponds to each of the digit keys on the remote controller as follows.**

| Digit-key | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Code | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

- **As the counter indication and remaining tape indication are not displayed FDP during the EVR adjustment mode, check them on the TV monitor screen.**
- **When performing the EVR adjustment, confirm that the FDP indication is changed to the EVR mode, as shown below.**

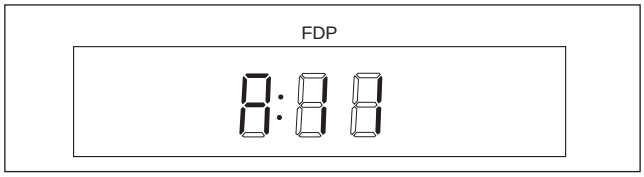



Fig.3-1-7a EVR mode

### 3.2 Mechanism compatibility adjustment

**Notes:**

- **Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the A/C head, drum assembly or any part of the tape transport system.**
- **To prevent damaging the alignment tape in the compatibility adjustment, prepare a cassette tape (for self-recording/playback), perform a test on it by transporting it and making sure that the tape is not bent by the tape transport mechanisms such as in the guide rollers.(See Fig.3-2-2a.)**

### 3.2.1 Tension pole position

**Notes:**

- **This adjustment must be performed every time the tension band is replaced.**

| | | |
|---|---|---|
| Signal | (A) | • Back tension cassette gauge [PUJ48076-2] |
| Mode | (B1)<br>(B2) | • PB<br>• Eject end |
| Adjustment part | (F) | • Adjust pin [Mechansim assembly] |
| Specified value | (G) | • 25 - 51 gfcm (2.45 - 5 x $10^{-3}$ Nm) |

(1) Play back the back tension cassette gauge (A).
(2) Check that the indicated value on the left side gauge is within the specified value (G).
(3) If the indicated value is not within the specified value (G), perform the adjustment in a following procedure.(See Fig.3-2-1a.)
   a) Remove the top frame, cassette holder and side frames (L/R) all together. (refer to the SERVICE MANUAL No.86700 [MECHANISM ASSEMBLY].)
   b) Rotate the loading motor gear to move the control plate so that the triangular stamping to the left of the “P”stamping is aligned with the stamping (a) on the main deck. This positioning is mode (B1).
   c) Adjust by turning the adjustment pin so that the tip of the tension arm is aligned with the stamping (b) on the main deck.
   d) Rotate the reel disk (S) by about one turn clockwise and make sure that the round hole of the adjustment pin is located in the “OK” range. If it is outside this range, restart the adjustment from the beginning.

   After completion of the adjustment, rotate the loading gear motor to return it to the mode (B2) position.

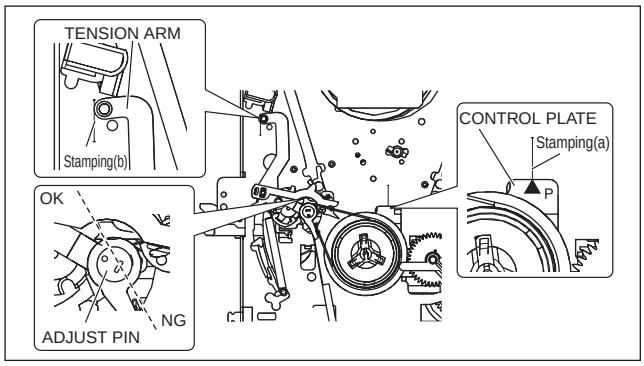



Fig.3-2-1a

### 3.2.2 FM waveform linearity

| | | |
|---|---|---|
| Signal | (A1)<br>(A2) | • Alignment tape(SP, stairstep, PAL) [MHPE]<br>• Alignment tape(LP, stairstep, PAL) [MHPE-L] |
| Mode | (B) | • PB |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D) | • TP106 (PB. FM) |
| External trigger | (E) | • TP111 (D.FF) |
| Adjustment part | (F) | • Guide roller [Mechanism assembly] |
| Specified value | (G) | • Flat V.PB FM waveform |
| Adjustment tool | (H) | • Roller driver [PTU94002] |

(1) Play back the alignment tape (A1).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Set the VCR to the manual tracking mode.
(4) Make sure that there is no significant level drop of the V.PB FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (See Fig. 3-2-2b.)
(5) Reduce the V.PB FM waveform by the tracking operation.
If a drop in level is found on the left side, turn the guide roller of the pole base assembly (supply side) with the roller driver to make the V.PB FM waveform linear.
If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the roller driver to make it linear. (See Fig. 3-2-2b.)
(6) Make sure that the V.PB FM waveform varies in parallel and linearly with the tracking operation again. When required,
perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
(7) Unload the cassette tape once, play back the alignment tape (A1) again and confirm the V.PB FM waveform.
(8) After adjustment, confirm that the tape wrinkling does not occur at the roller upper or lower limits. (See Fig. 3-2-2a.)
[Perform adjustment step (9) only for the models equipped with SP mode and EP (or LP) mode.]

**[Perform adjustment step (9) only for the models equipped with SP mode and EP (or LP) mode.]**

(9) Repeat steps (1) to (8) by using the alignment tape (A2).

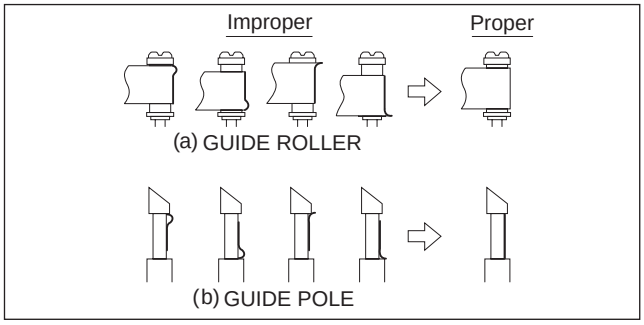



Fig.3-2-2a

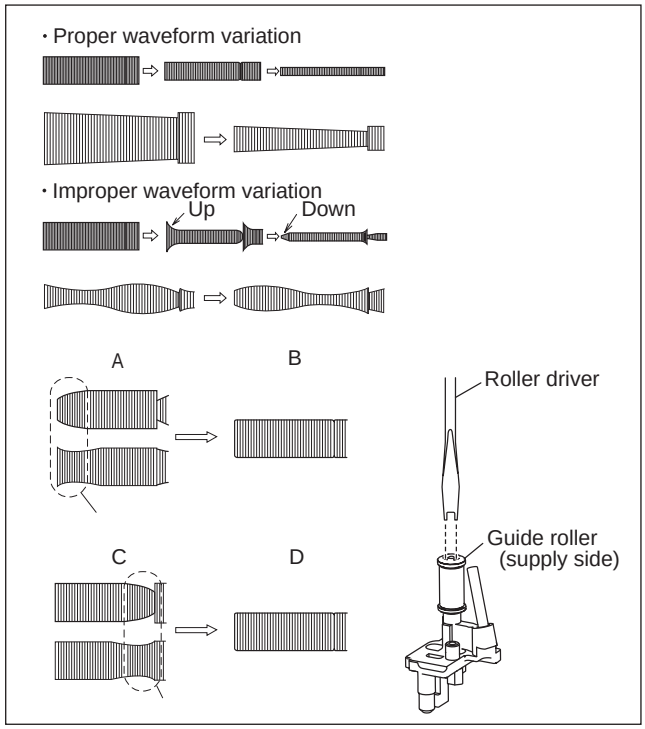



Fig.3-2-2b

### 3.2.3 Height and tilt of the A/C head

**Note:**

- ***Set a temporary level of the height of the A/C head in advance to make the adjustment easier after the A/C head has been replaced. (Refer to the SERVICE MANUAL No.86700 [MECHANISM ASSEMBLY].)***

| | | |
|---|---|---|
| Signal | (A) | • Alignment tape(SP, stairstep, PAL) [MHPE] |
| Mode | (B) | • PB |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D1)<br>(D2) | • AUDIO OUT terminal<br>• TP4001 (CTL. P) |
| External trigger | (E) | • TP111 (D.FF) |
| Adjustment part | (F) | • A/C head [Mechanism assembly] |
| Specified value | (G) | • Maximum waveform |

(1) Play back the alignment tape (A).
(2) Apply the external trigger signal to D.FF (E), to observe the AUDIO OUT waveform and Control pulse waveform at the measuring points (D1) and (D2) in the ALT mode.
(3) Set the VCR to the manual tracking mode.
(4) Adjust the AUDIO OUT waveform and Control pulse waveform by turning the screws (1), (2) and (3) little by little until both waveforms reach maximum. The screw (1) and (3) are for adjustment of tilt and the screw (2) for azimuth.

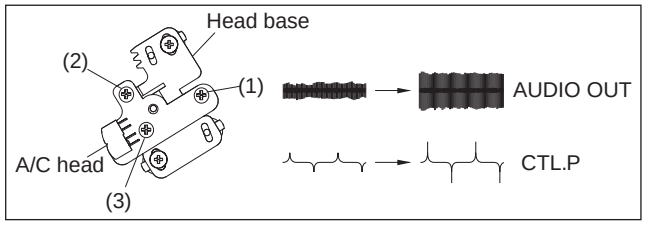



Fig.3-2-3a

### 3.2.4 A/C head phase (X-value)

| | | |
|---|---|---|
| Signal | (A1)<br>(A2) | • Alignment tape(SP, stairstep, PAL) [MHPE]<br>• Alignment tape(LP,stairstep,PAL) [MHPE-L] |
| Mode | (B) | • PB |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D) | • TP106 (PB. FM) |
| External trigger | (E) | • TP111 (D.FF) |
| Adjustment part | (F) | • A/C head base [Mechanism assembly] |
| Specified value | (G) | • Flat V.PB FM waveform |
| Adjustment tool | (H) | • Roller driver [PTU94002] |

(1) Play back the alignment tape (A1).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Set the VCR to the manual tracking mode.
(4) Loosen the screws (4) and (5), then set the Roller driver to the innermost projected part of the A/C head. (See Fig. 3-2-4a.)
(5) Rotate the roller driver so that the A/C head comes closest to the capstan. From there, move the A/C head back gradually toward the drum until the point where the FM waveform is maximized for the second time, and then tighten the screws (4) and (5) temporarily.
(6) Play an alignment tape (A2) and set to the manual-tracking mode.
(7) Fine-adjust A/C head base position to maximize the FM waveform, and then tighten the screws (4) and (5) firmly.
(8) Play alignment tapes (A1) and (A2) and confirm that the FM waveforms are maximized when the tracking is at the center position.

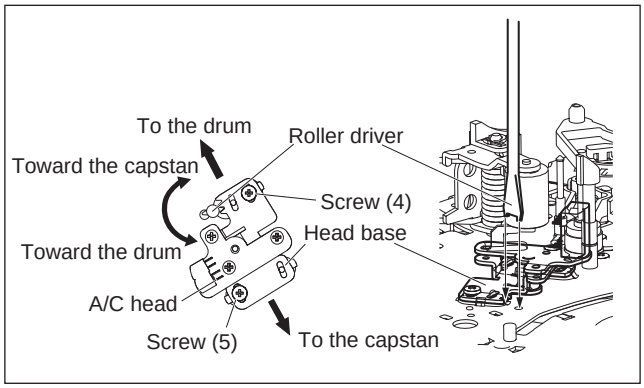


Fig.3-2-4a

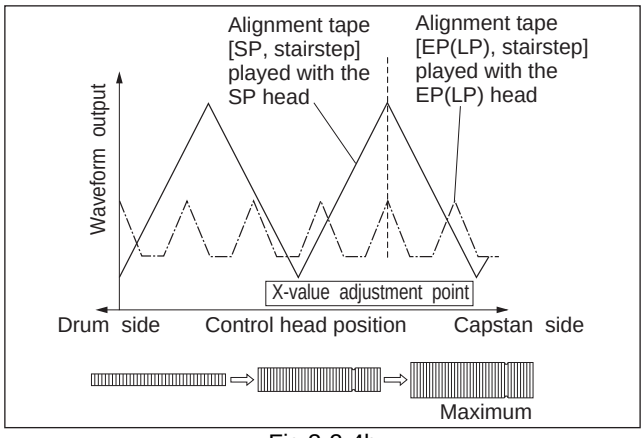


Fig.3-2-4b

### 3.3 Electrical adjustment

**Note:**
The following adjustment procedures are not only necessary after replacement of consumable mechanical parts or board assemblies, but are also provided as references to be referred to when servicing the electrical circuitry.
In case of trouble with the electrical circuitry, always begin a service by identifying the defective points by using the measuring instruments as described in the following electrical adjustment procedures. After this, proceed to the repair, replacement and/or adjustment. If the required measuring instruments are not available in the field, do not change the adjustment parts (variable resistor, etc.) carelessly.

### 3.3.1 Servo circuit

#### 3.3.1.1 Switching point

| | | |
|---|---|---|
| Signal | (A1)<br>(A2)<br>(A3) | • Stairstep signal<br>• Alignment tape(LP,stairstep,PAL) [MHPE-L]<br>• Alignment tape(EP,stairstep,NTSC) [MHP-L] |
| Mode | (B) | • PB<br>• TBC OFF |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D) | • VIDEO OUT terminal (75 ohm terminated)<br>• TP106 (PB. FM) |
| External trigger | (E) | • TP111 (D.FF) |
| Adjustment part | (F) | • Jig RCU: Code ”51” or ”52” |
| Specified value | (G) | • 8.0 ± 0.5H(PAL)<br>• 7.5 ± 0.5H(NTSC) |
| Adjustment tool | (H) | • Jig RCU [PTU94023B] |

(1) Play back the signal (A1) of the alignment tape (A2).
(2) Apply the external trigger signal to D.FF (E) to observe the VIDEO OUT waveform and V.PB FM waveform at the measuring points (D1) and (D2).
(3) Set the VCR to the manual tracking mode.
(4) Adjust tracking so that the V.PB FM waveform becomes maximum.
(5) Transmit the code (F1) from the Jig RCU to adjust so that the trigger point of the VIDEO OUT waveform is changed from the trailing edge of the V. sync signal becomes the specified value (G1).
(6) Set the VCR to the stop mode or eject mode.
(7) Play back the signal (A1) of the alignment tape (A3).
(8) Repeat steps (2) to (6).

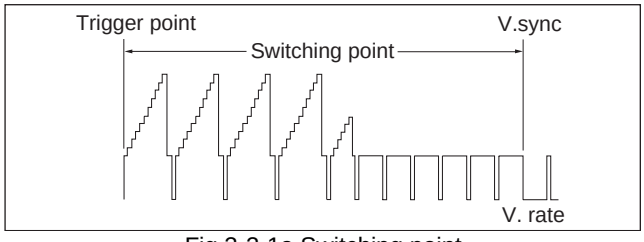


Fig.3-3-1a Switching point

#### 3.3.1.2 Slow tracking preset

| | | |
|---|---|---|
| Signal | (A1)<br>(A2) | • Ext. input<br>• Color (colour) bar signal [PAL] |
| Mode | (B1)<br>(B2) | • S-VHS SP<br>• S-VHS LP |
| Measuring point | (D) | • TV-Monitor |
| Adjustment part | (F) | • Jig RCU: Code “71”or “72” |
| Specified value | (G) | • minimum noise |
| Adjustment tool | (H) | • Jig RCU [PTU94023B] |

(1) Record the signal (A2) in the mode (B1), and play back the recorded signal.
(2) Set the VCR to the manual tracking mode.
(3) Set the VCR to the FWD slow (+1/6x) mode.
(4) Transmit the code (F) from the Jig RCU to adjust so that the noise bar becomes the specified value (G) on the TV monitor in the slow mode.
(5) Set the VCR to the Stop mode.
(6) Confirm that the noise bar is (G) on the TV monitor in the slow mode.
(7) Repeat steps (3) to (6) in the REV slow (-1/6x) mode.
(8) Repeat steps (1) to (7) in the mode (B2).

**Note:**

- **For FWD slow (+1/6x) playback, transmit the code "08" from the Jig RCU to enter the slow playback mode, and transmit the code "D0"for REV slow (-1/6x) mode.**

### 3.3.2 Video circuit

#### 3.3.2.1 EE Y/PB Y (S-VHS/VHS) level

| | | |
|---|---|---|
| Signal | (A1) | • Ext. S-input |
| | (A2) | • Ext. input |
| | (A3) | • Color (colour) bar signal [PAL] |
| Mode | (B1) | • EE SP |
| | (B2) | • S-VHS SP |
| | (B3) | • VHS SP |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D) | • Y OUT terminal (75 ohm terminated) |
| EVR mode | (F1) | • Jig code "57" |
| EVR address | (F2) | • A : 11 |
| | (F3) | • Jig code "21" twice |
| | (F4) | • Jig code "18" or "19" (Channel +/-) |
| Specified value | (G) | • 1.00 ± 0.05 Vp-p |
| Adjustment tool | (H) | • Jig RCU [PTU94023B] |

(1) Input the signal (A3) from the input point (A1).
(2) Set the VCR to the mode (B1).
(3) Observe the Y OUT waveform at the measuring point (D).
(4) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(5) Set the EVR address to (F2) by transmitting the code (F3) from the Jig RCU.
(6) Transmit the code (F4) from the Jig RCU to adjust so that the Y level of the Y OUT waveform becomes the specified value (G).
(7) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(8) Input the signal (A3) from the input point (A2).
(9) Repeat steps (3) to (7) in the mode (B1).
(10) Record the signal (A3) in the mode (B2), and play back the recorded signal.
(11) Set the VCR to the manual tracking mode.
(12) Repeat steps (3) to (7) in the mode (B2).
(13) Record the signal (A3) in the mode (B3), and play back the recorded signal.
(14) Set the VCR to the manual tracking mode.
(15) Repeat steps (3) to (7) in the mode (B3).

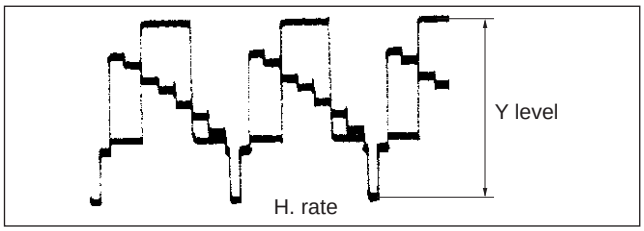


Fig.3-3-2a EE Y/PB Y lebel

### 3.3.3 Syscon circuit [EX MODEL]

**Notes:**

- **When perform this adjustment, remove the Mechanism assembly.**

#### 3.3.3.1 Timer clock

| | | |
|---|---|---|
| Signal | (A1) | • No signal |
| Mode | (B) | • EE |
| Equipment | (C) | • Frequency counter |
| Measuring point | (D1) | • IC3001 pin 44 |
| | (D2) | • IC3001 pin 103 |
| | (D3) | • C3054 + and - |
| Adjustment part | (F) | • C3025 (TIMER CLOCK) |
| Specified value | (G1) | • 1024.008 ± 0.001 Hz (976.5549 ± 0.0010 usec) |

(1) Connect the frequency counter to the measuring point (D1).
(2) Connect the short wire between the short point (D2) and Vcc (5V).
(3) Short the leads of capacitor (D3) once in order to reset the microprocessor of the Syscon.
(4) Disconnect the short wire between the short point (D2) and Vcc then connect it again.
(5) Adjust the Adjustment part (F) so that the output frequency becomes the specified value (G).

### 3.3.4 PAL/SECAM converter circuit [EF MODEL]

**Notes:**

- **Unless otherwise specified in this P/S Converter circuit adjustments, all measuring points and adjustment parts are located on the S-P Converter board.**

#### 3.3.4.1 Colour difference level

| | | |
|---|---|---|
| Signal | (A) | • Color (colour) bar signal [SECAM] |
| Mode | (B) | • EE |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D) | • CN1601 Pin 7 |
| Adjustment part | (F1) | • VR1602 (B-Y ADJ) |
| | (F2) | • VR1601 (R-Y ADJ) |
| Specified value | (G1) | • 460 ± 20 mVp-p : VR1602 (B-Y) |
| | (G2) | • 620 ± 20 mVp-p : VR1601 (R-Y) |

(1) Observe the C (converted colour) waveform at the measuring point (D).
(2) Adjust the adjustment part (F1) so that the higher level of the Yellow and Blue of the C waveform becomes the specified value (G1).
(3) Adjust the adjustment part (F2) so that the higher level of the Green and Magenta of the C waveform becomes the specified value (G2).

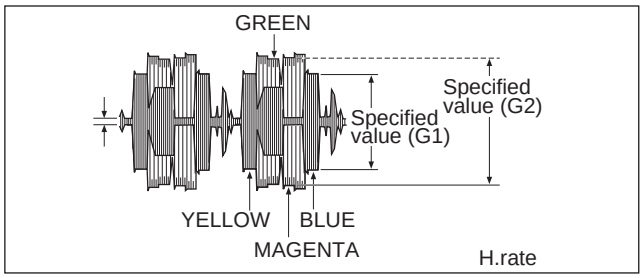



Fig.3-3-4a Colour difference level

#### 3.3.4.2 SECAM burst position

| | | |
|---|---|---|
| Signal | (A1) | • Ext. input |
| | (A2) | • Color (colour) bar signal [SECAM] |
| Mode | (B) | • EE |
| Equipment | (C) | • Oscilloscope |
| Measuring point | (D1) | • CN1601 Pin 7 |
| | (D2) | • CN1601 Pin 3 |
| Adjustment part | (F1) | • VR1603 (SECAM BURST POSITION) |
| Specified value | (G) | • Tr = 5.6 ± 0.1 µsec |

(1) Observe the waveforms appeared at the measuring points (D1) and (D2).
(2) Adjust the adjustment part (F) so that the waveforms timing width between the H-SYNC and the colour burst signal becomes the specified value (G).

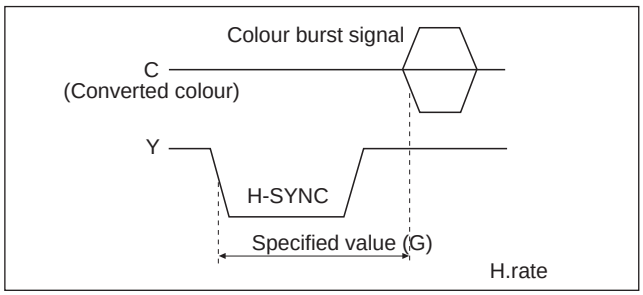



Fig.3-3-4b SECAM burst position

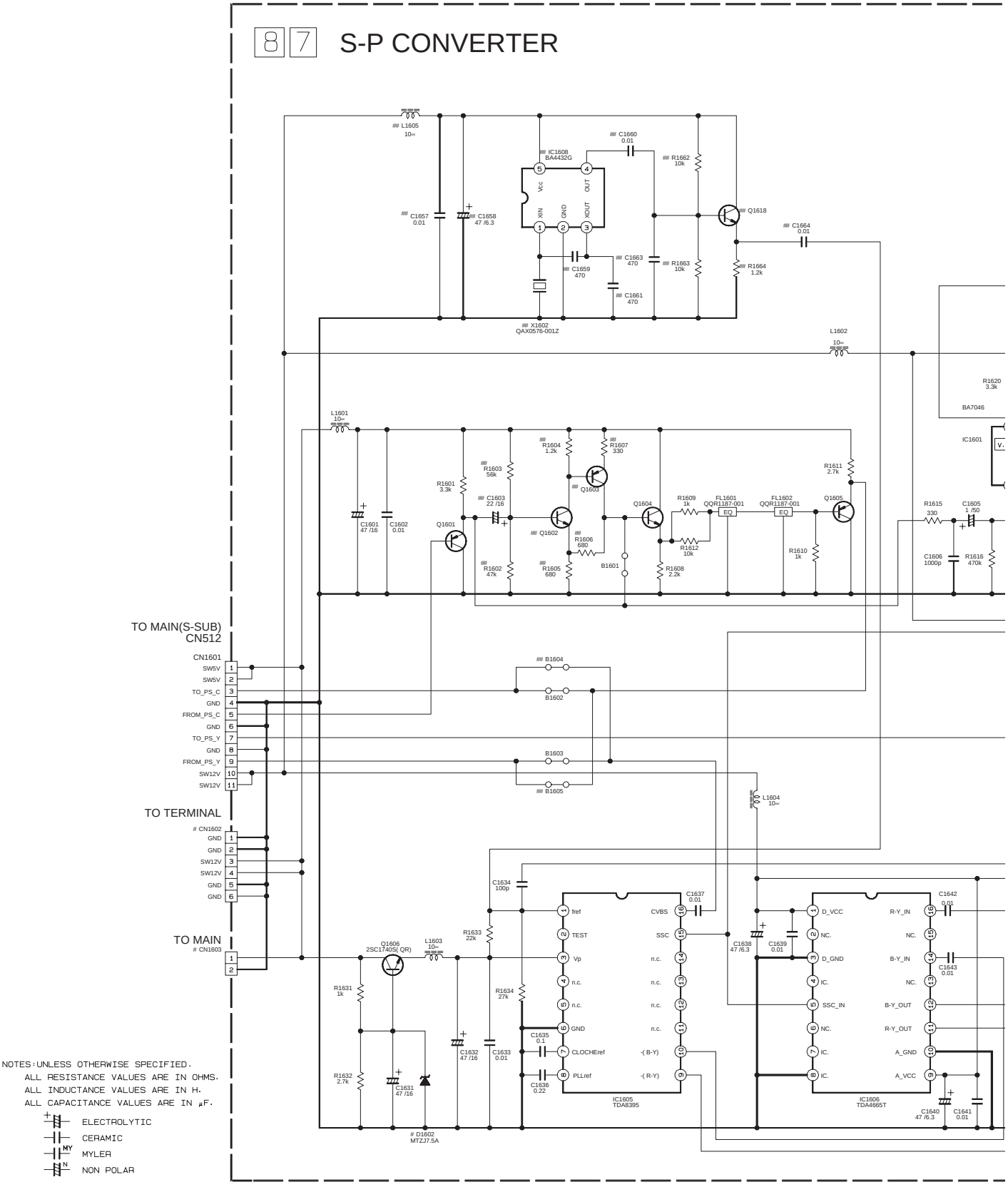
JVC
**VICTOR COMPANY OF JAPAN, LIMITED**
AV & MULTIMEDIA COMPANY VIDEO RECORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

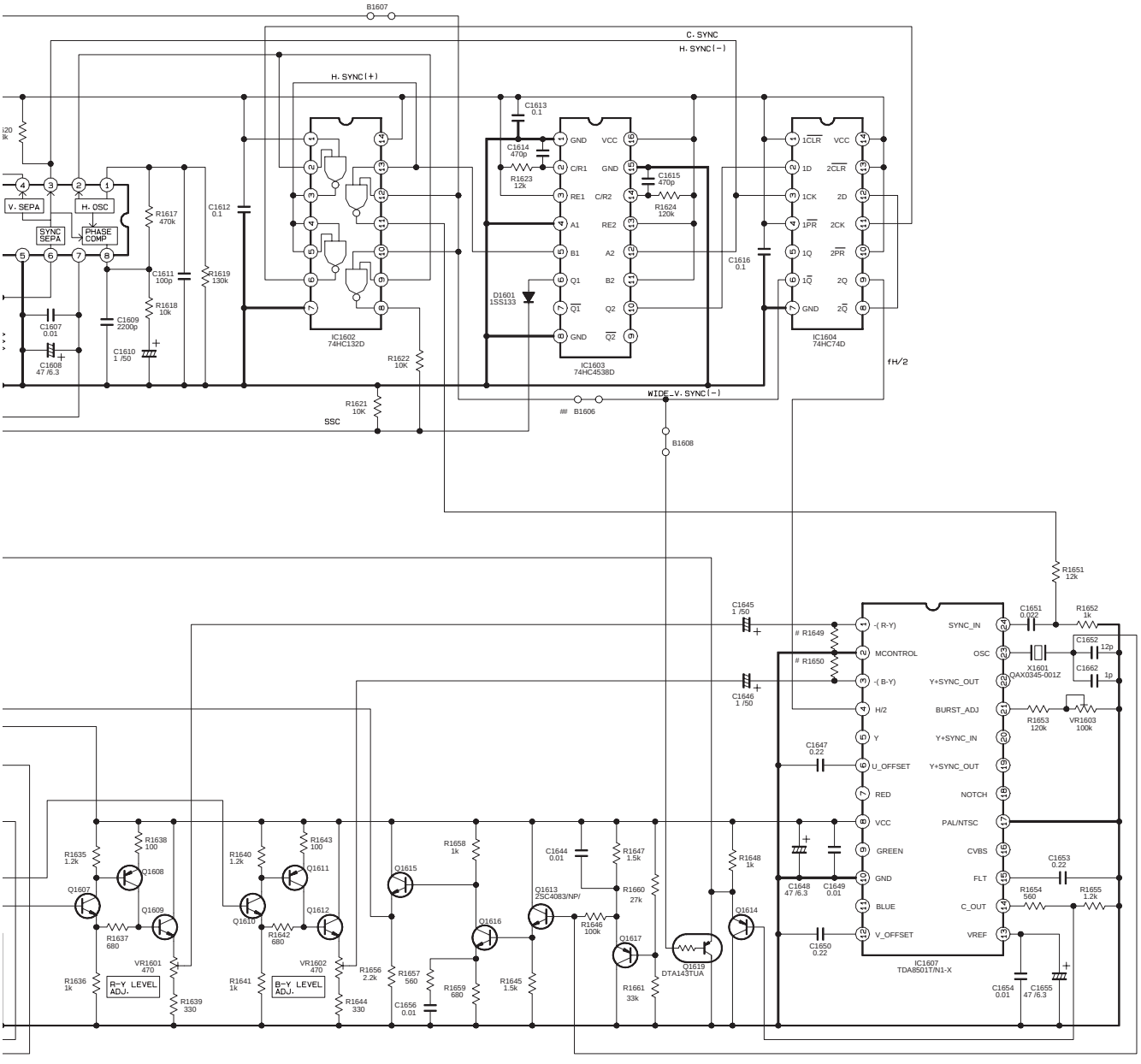
(No.82961)

Printed in Japan
20034WPC

# SECTION 4
# CHARTS AND DIAGRAMS

## 4.1 S-P CONVERTER SCHEMATIC DIAGRAM [EF MODEL]

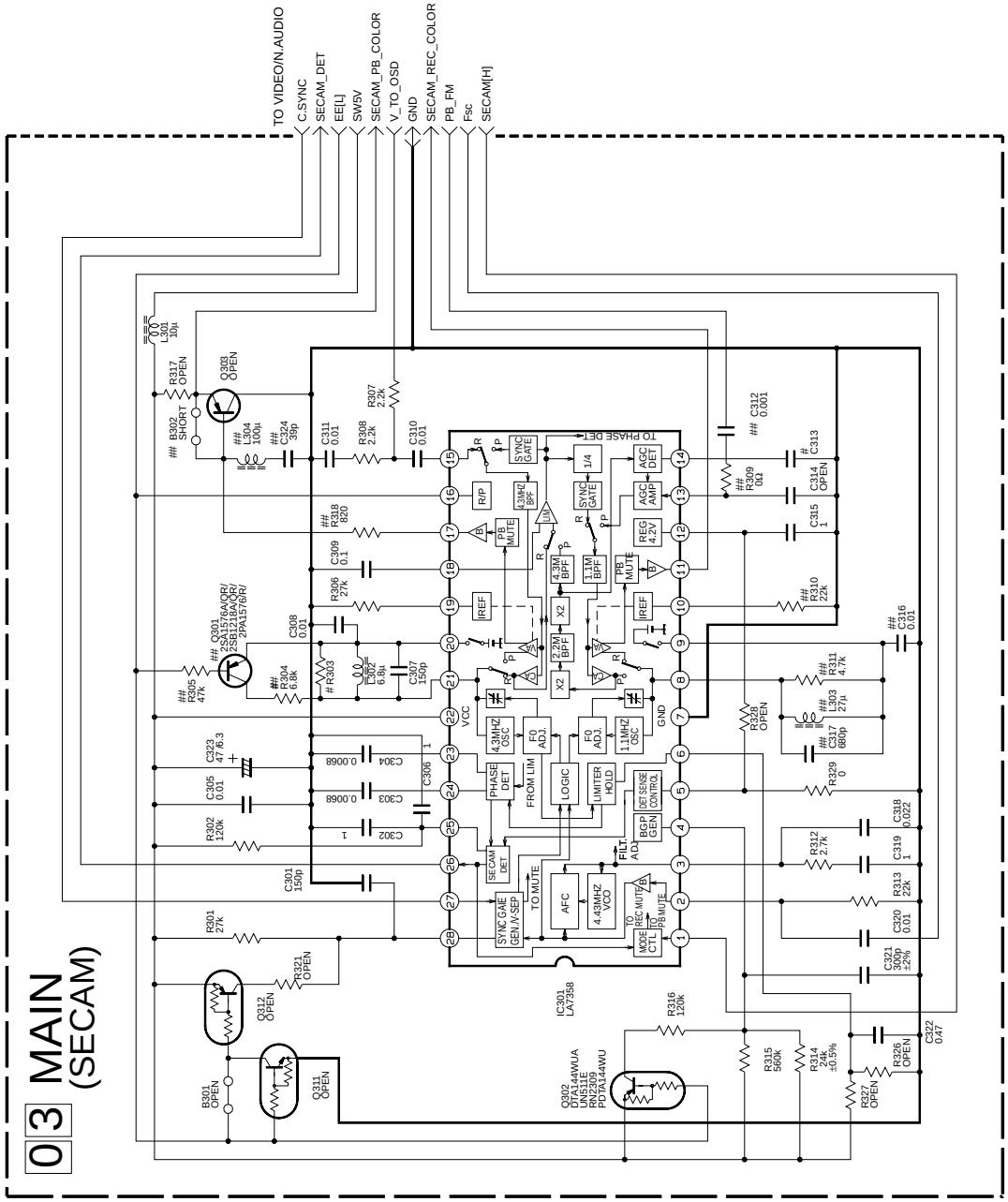





p20331001a_rev0

E F G

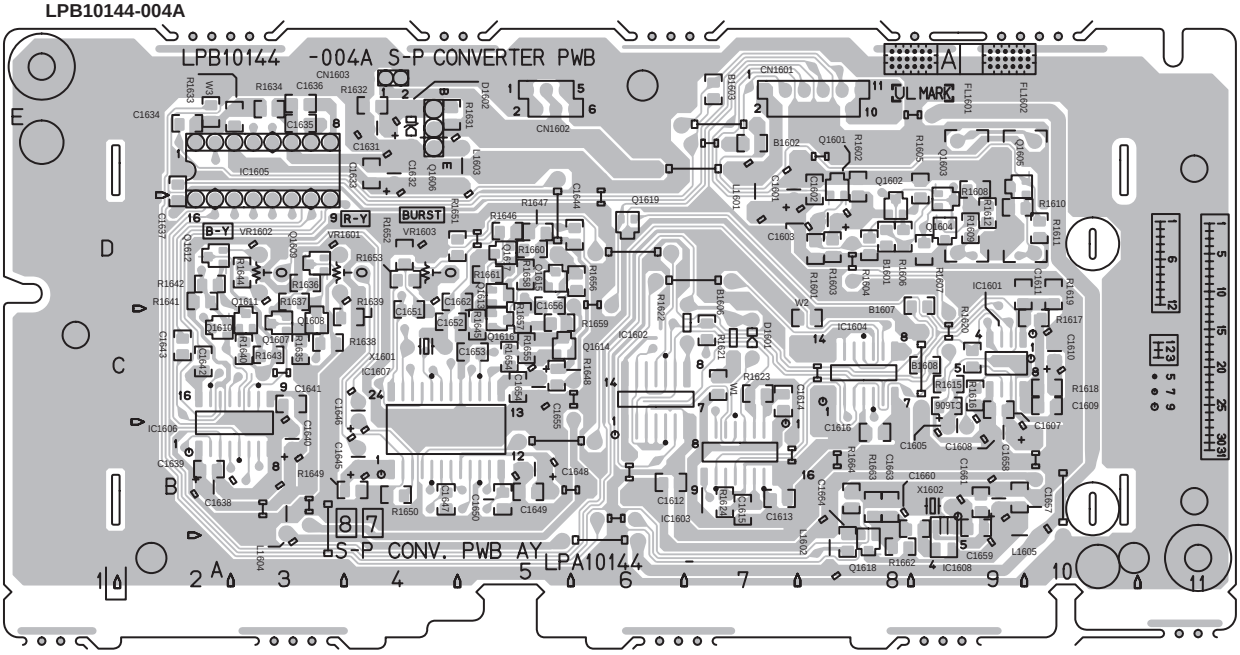
## 4.2 MAIN(SECAM) SCHEMATIC DIAGRAM [EF MODEL]




p30087001a_rev1

## 4.3 S-P CONVERTER CIRCUIT BOARD [EF MODEL]

**<87> S-P CONVERTER**
**LPB10144-004A**




### COMPONENT PARTS LOCATION GUIDE <S-P CONVERTER> LPB10144-004A

| REF.NO. | LOCATION |
|---|---|
| **CAPACITOR** | |
| C1601 | A D 7D |
| C1602 | B C 8D |
| C1603 | A D 8D |
| C1605 | A D 9B |
| C1606 | B C 9B |
| C1607 | B C 9B |
| C1608 | A D 9B |
| C1609 | B C 10B |
| C1610 | A D 10C |
| C1611 | B C 9C |
| C1612 | B C 6B |
| C1613 | B C 7B |
| C1614 | B C 7B |
| C1615 | B C 7B |
| C1616 | B C 8B |
| C1631 | A D 4E |
| C1632 | A D 4D |
| C1633 | B C 4D |
| C1634 | B C 2E |
| C1635 | B C 3E |
| C1636 | B C 3E |
| C1637 | B C 2D |
| C1638 | A D 2B |
| C1639 | B C 2B |
| C1640 | A D 3B |
| C1641 | B C 3B |
| C1642 | B C 2C |
| C1643 | B C 2C |
| C1644 | B C 6D |
| C1645 | A D 4B |
| C1646 | A D 4B |
| C1647 | B C 4B |
| C1648 | A D 5B |
| C1649 | B C 5B |
| C1650 | B C 5B |
| C1651 | B C 4C |
| C1652 | B C 4C |
| C1653 | B C 5C |
| C1654 | B C 5C |
| C1655 | A D 5C |
| C1656 | B C 5C |
| C1657 | B C 9B |
| C1658 | A D 9B |
| C1659 | B C 9A |
| C1660 | B C 9A |
| C1661 | B C 9B |
| C1662 | B C 5C |
| C1663 | B C 8B |
| C1664 | B C 8A |
| **CONNECTOR** | |
| CN1601 | A D 7E |
| CN1602 | A D 5E |
| CN1603 | A D 4E |
| **DIODE** | |
| D1601 | A D 7C |
| D1602 | A D 4E |
| **IC** | |
| IC1601 | B C 9C |
| IC1602 | B C 6C |
| IC1603 | B C 7B |
| IC1604 | B C 8C |
| IC1605 | A D 2E |
| IC1606 | B C 3B |
| IC1607 | B C 4B |
| IC1608 | B C 9A |
| **COIL** | |
| L1601 | A D 7E |
| L1602 | A D 8A |
| L1603 | A D 5E |
| L1604 | A D 3B |
| L1605 | A D 10A |
| **TRANSISTOR** | |
| Q1601 | B C 8D |
| Q1602 | B C 8D |
| Q1603 | B C 9D |
| Q1604 | B C 9D |
| Q1605 | B C 9D |
| Q1606 | A D 4E |
| Q1607 | B C 3C |
| Q1608 | B C 3C |
| Q1609 | B C 3D |
| Q1610 | B C 2C |
| Q1611 | B C 3C |
| Q1612 | B C 2D |
| Q1613 | B C 5C |
| Q1614 | B C 5C |
| Q1615 | B C 5D |
| Q1616 | B C 5C |
| Q1617 | B C 5D |
| Q1618 | B C 8A |
| Q1619 | B C 6D |
| **RESISTOR** | |
| R1601 | B C 8D |
| R1602 | B C 8D |
| R1603 | B C 8D |
| R1604 | B C 8D |
| R1605 | B C 9D |
| R1606 | B C 8D |
| R1607 | B C 9D |
| R1608 | B C 9D |
| R1609 | B C 9D |
| R1610 | B C 9D |
| R1611 | B C 10D |
| R1612 | B C 9D |
| R1615 | B C 9C |
| R1616 | B C 9C |
| R1617 | B C 10C |
| R1618 | B C 10C |
| R1619 | B C 10C |
| R1620 | B C 9C |
| R1621 | A D 7C |
| R1622 | A D 7C |
| R1623 | B C 7C |
| R1624 | B C 7B |
| R1631 | B C 4E |
| R1632 | B C 4E |
| R1633 | B C 3E |
| R1634 | B C 3E |
| R1635 | B C 3C |
| R1636 | B C 3D |
| R1637 | B C 3C |
| R1638 | B C 3C |
| R1639 | B C 4C |
| R1640 | B C 3C |
| R1641 | B C 2C |
| R1642 | B C 2D |
| R1643 | B C 3C |
| R1644 | B C 3D |
| R1645 | B C 5C |
| R1646 | B C 5D |
| R1647 | B C 5D |
| R1648 | B C 5C |
| R1649 | B C 4B |
| R1650 | B C 4D |
| R1651 | B C 5D |
| R1652 | B C 4D |
| R1653 | B C 5C |
| R1654 | B C 6D |
| R1655 | B C 5C |
| R1656 | B C 5D |
| R1657 | B C 5C |
| R1658 | B C 5D |
| R1659 | B C 5C |
| R1660 | B C 5D |
| R1661 | B C 5D |
| R1662 | B C 8A |
| R1663 | B C 8B |
| R1664 | B C 8B |
| **OTHER** | |
| FL1601 | A D 9D |
| FL1602 | A D 10E |
| VR1601 | A D 3D |
| VR1602 | A D 3D |
| VR1603 | A D 4D |
| X1601 | A D 4C |
| X1602 | A D 9B |

# SECTION 5
# PARTS LIST

## 5.1 EXPLODED VIEW

### SAFETY PRECAUTION

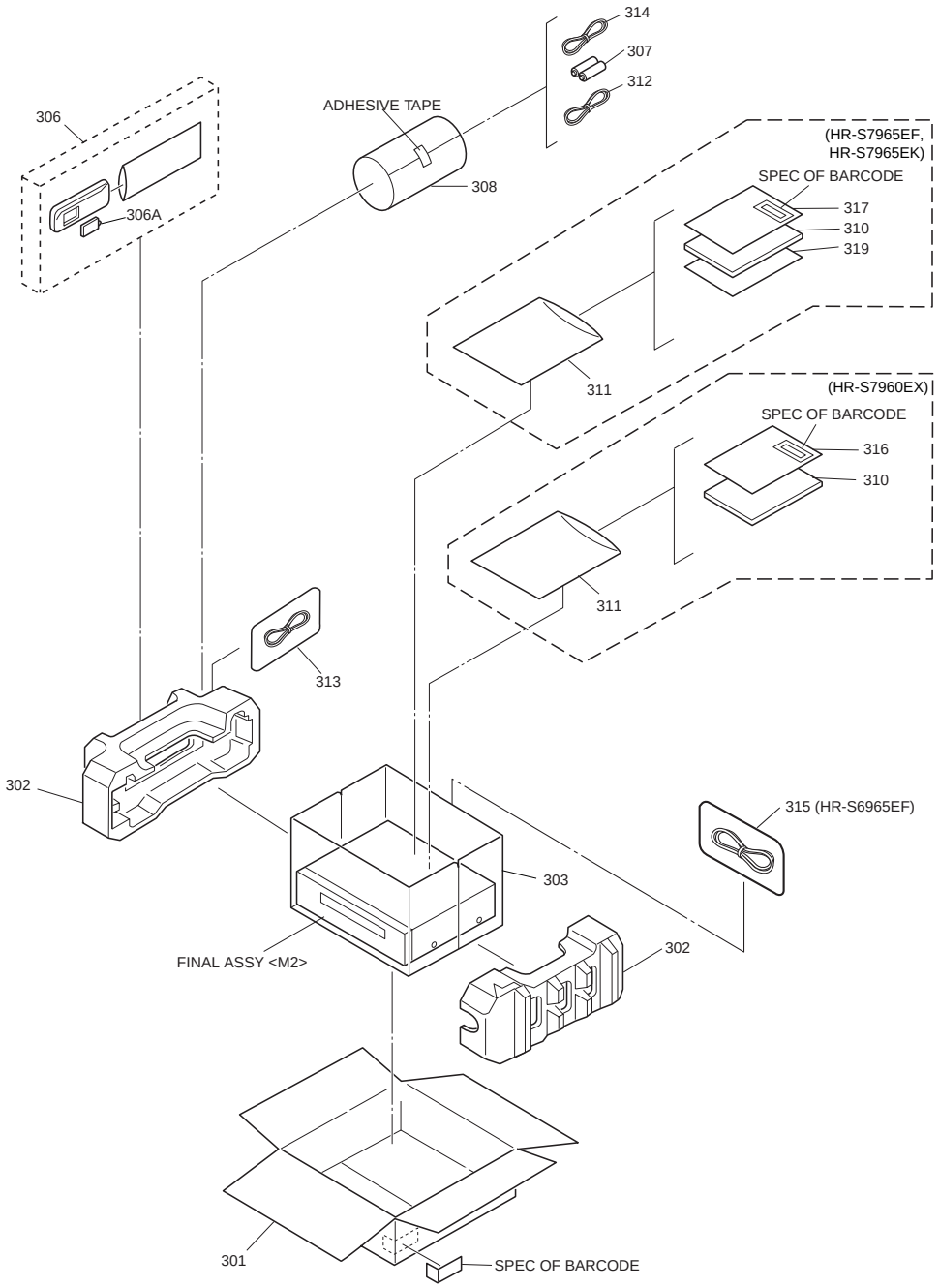
**Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.**

### BEWARE OF BOGUS PARTS

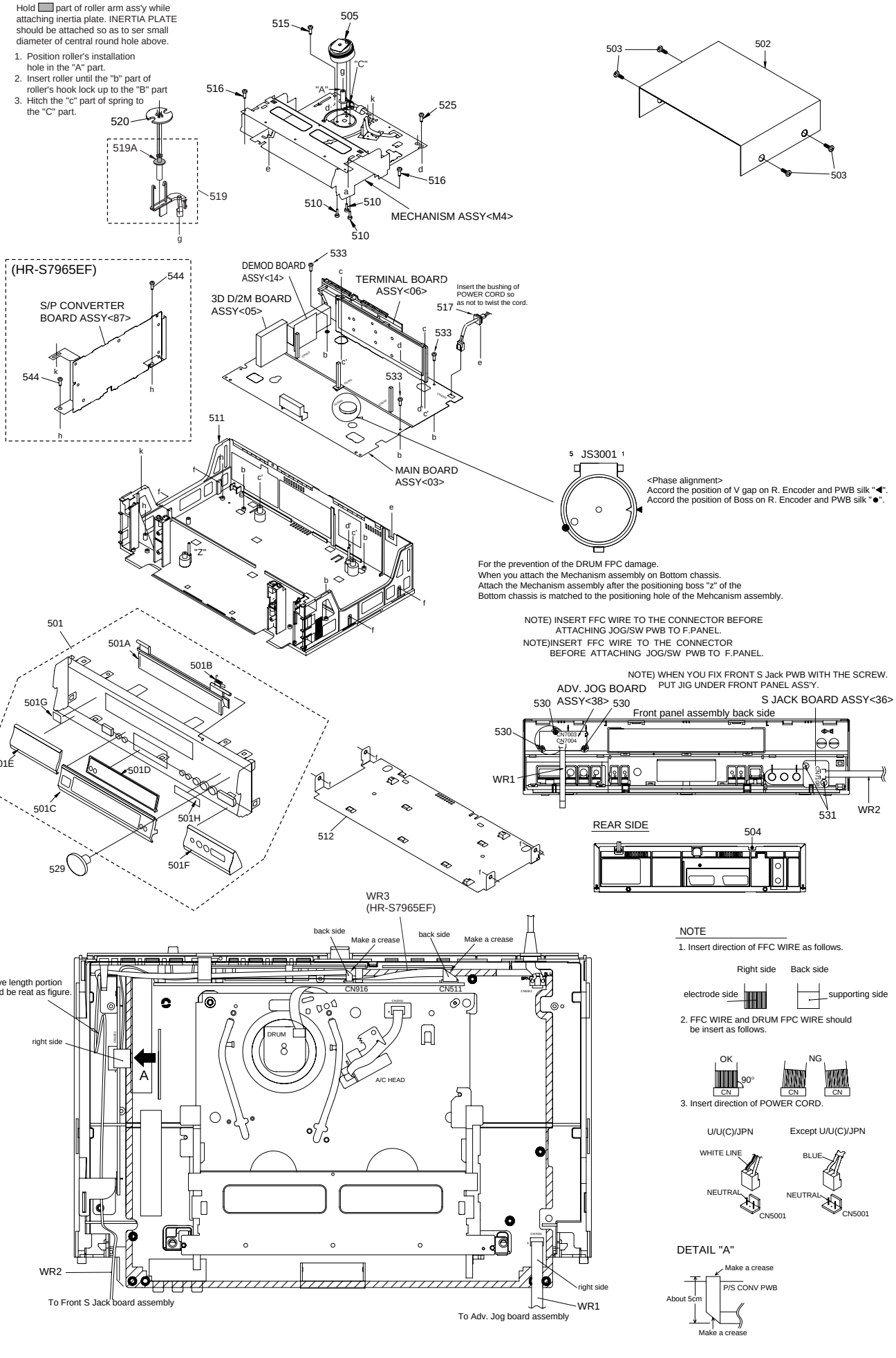
***Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.***

#### 5.1.1 PACKING AND ACCESSORY ASSEMBLY <M1>

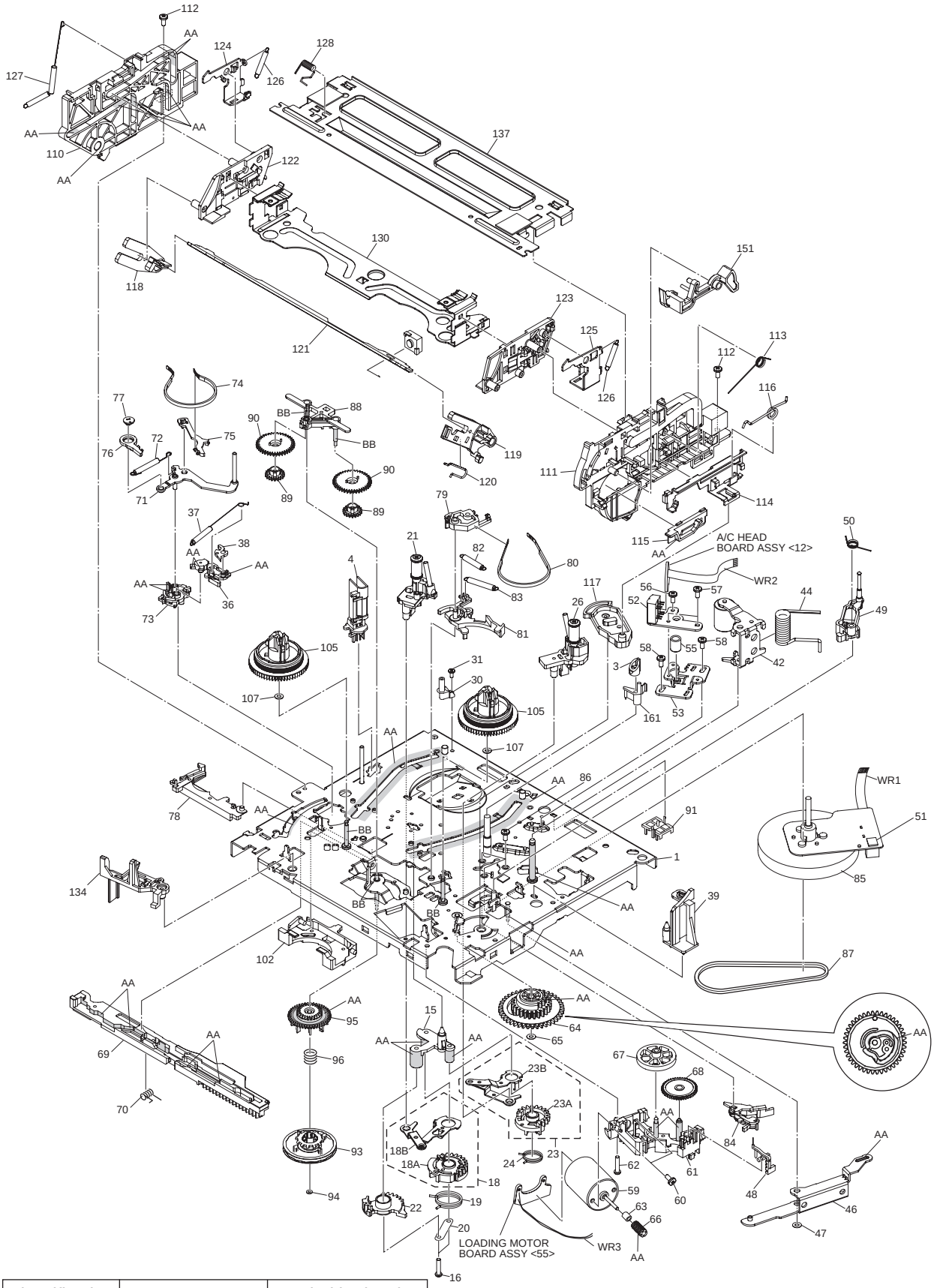
**The instruction manual to be provided with this product will differ according to the destination.**



## 5.1.2 FINAL ASSEMBLY <M2>



### 5.1.3 MECHANISM ASSEMBLY <M4>




| Classification | Part No. | Symbol in drawing |
|---|---|---|
| Grease | KYODO-SH-JB | AA |
| Oil | COSMO-HV56 | BB |

**NOTE:** The section marked in **AA** and **BB** indicate lubrication and greasing areas.

## 5.2 PARTS LIST

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | A B C |
|---|---|---|---|
| ********** | | | |
| | | **PACKING AND ACCESSORY ASSEMBLY <M1>** | |
| | 301 | LP30855-004B | PACKING CASE | A B C |
| | 302 | LP31187-001A | CUSHION ASSY | A B C |
| | 303 | PQM30021-093 | POLY BAG | A B C |
| | 306 | LP20878-016A | REMOTE CTL UNIT | A B C |
| | 306A | LP40610-003A | COVER(BATTERY) | A B C |
| | 307 | ——— | BATTERY,X2 | A B C |
| | 308 | QPC02202230P | POLY BAG,CABLE | A B C |
| ⚠ | 310 | LPT0753-001A | INST.BOOK(ENGLISH),FOR EX | A |
| ⚠ | 310 | LPT0753-002A | INST.BOOK(GERMANY),FOR EX&EY | A |
| ⚠ | 310 | LPT0753-003A | INST.BOOK(FRENCH),FOR EX | A |
| ⚠ | 310 | LPT0753-004A | INST.BOOK(DUTCH),FOR EX | A |
| ⚠ | 310 | LPT0753-005A | INST.BOOK(SPANISH),FOR EX | A |
| ⚠ | 310 | LPT0753-006A | INST.BOOK(ITALIAN),FOR EX | A |
| ⚠ | 310 | LPT0753-007A | INST.BOOK(DANISH),FOR EY | A |
| ⚠ | 310 | LPT0753-008A | INST.BOOK(FINNISH),FOR EY | A |
| ⚠ | 310 | LPT0753-009A | INST.BOOK(SWEDISH),FOR EY | A |
| ⚠ | 310 | LPT0753-010A | INST.BOOK(NORWEGIAN),FOR EY | A |
| ⚠ | 310 | LPT0753-011A | INST.BOOK(PORTGUESE),FOR EX | A |
| ⚠ | 310 | LPT0753-012A | INST.BOOK(GREEK),FOR EX | A |
| ⚠ | 310 | LPT0753-013A | INST.BOOK(CZECH),FOR EZ | A |
| ⚠ | 310 | LPT0753-014A | INST.BOOK(POLISH),FOR EZ | A |
| ⚠ | 310 | LPT0753-015A | INST.BOOK(HUNGARIAN),FOR EZ | A |
| ⚠ | 310 | LPT0775-001B | INST.BOOK(FRENCH) | B |
| ⚠ | 310 | LPT0770-001A | INST.BOOK(ENGLISH) | C |
| | 311 | QPC02503530P | POLY BAG,INST | A B C |
| | 312 | PEAC0300-02 | RF CABLE | A B C |
| | 313 | QAL0517-005 | LED CABLE ASSY | B C |
| | 315 | QAM0238-003 | PERI CABLE | B |
| | 316 | BT-54013-6 | WARRANTY CARD | A |
| | 317 | BT-54008-4 | GUARANTY CARD | B C |
| | 319 | LYT0194-001B | Q.CARD(JUK) | C |
| ********** | | | |
| | | **FINAL ASSEMBLY<M2>** | |
| ⚠ | 501 | LP10452-027C | FRONT PANEL ASSY | A |
| ⚠ | 501 | LP10452-017C | FRONT PANEL ASSY | B |
| ⚠ | 501 | LP10452-029C | FRONT PANEL ASSY | C |
| | 501A | LP21123-008B | CASSETTE DOOR | A B C |
| | 501B | PQ46448 | TOR.SPRING | A B C |
| | 501C | LP21127-011B | COVER(WINDOW) | A C |
| | 501C | LP21127-007B | COVER(WINDOW) | B |
| | 501D | LP31188-016A | WINDOW(1) | A |
| | 501D | LP31188-009A | WINDOW(1) | B |
| | 501D | LP31188-018A | WINDOW(1) | C |
| | 501E | LP31142-013B | DOOR(JACK) | A |
| | 501E | LP31142-011B | DOOR(JACK) | B |
| | 501E | LP31142-015B | DOOR(JACK) | C |
| | 501F | LP30877-006A | COVER(R) | A B C |
| | 501G | LP41035-001A | STICKER | A B C |
| | 501H | LP41035-006A | STICKER | A B |
| | 501H | LP41035-007A | STICKER | C |
| ⚠ | 502 | LP10013-051C | TOP COVER | A B C |
| | 503 | QYTDSF3010R | TAP SCREW,X4,SIDE | A B C |
| | 504 | QYTDSF3010M | TAP SCREW,REAR | A B C |
| | 505 | PDV2544A | DRUM FINAL ASSY | A B C |
| | 510 | QYSPSPD3008Z | SCREW,X3,DRUM | A B C |
| ⚠ | 511 | LP10108-016H | BOTTOM CHASSIS | A C |
| ⚠ | 511 | LP10108-016G | BOTTOM CHASSIS | B |
| ⚠ | 512 | LP10014-002C | BOTTOM COVER | A B C |
| | 515 | QYTDSF4012Z | TAP SCREW,FOR MECHA | A B C |
| | 516 | QYSPSFG3010Z | TAP SCREW,X2,FOR MECHA | A B C |
| ⚠ | 517 | QMP4A10-170 | POWER CORD | A B |
| ⚠ | 517 | QMP51K0-170-K | POWER CORD | C |
| | 519 | LP40370-001F | ROLLER ARM ASSY | A B C |
| | 519A | PDM4311A-1 | ROLLER ASS'Y | A B C |
| | 520 | PQ45160 | INERTIA PLATE | A B C |
| | 525 | LP40700-001A | SPECIAL SCREW,FOR MECHA | A B C |
| | 529 | LP30875-001B | KNOB(ADV.JOG) | A C |
| | 529 | LP30875-002B | KNOB(ADV.JOG) | B |
| | 530 | QYTPSFG2608Z | TAP SCREW,X3,FOR A/J | A B C |
| | 531 | QYTDSF2608Z | TAP SCREW,X2,FOR S-JACK | A B C |
| | 533 | DPSF3010Z | SCREW,X3,MAIN | A B C |
| | 544 | QYTDSF3008Z | TAP SCREW,X2,S-P CONV. | B |
| | WR1 | QUQ212-0414CG | FFC WIRE,A.JOG(FSA) | A B C |
| | WR2 | QUQ212-0456CG | FFC WIRE,S.JAC(FSA) | A B C |
| | WR3 | QUQ112-1140CG | FFC WIRE,S/P CONV. | B |
| ********** | | | |
| | | **MECHANISM ASSEMBLY<M4>** | |
| | 1 | LP21039-001U | MAIN DECK ASSY | A B C |
| | 3 | LP40097-002E | GUIDE POLE CAP | A B C |
| | 4 | QAH0082-001 | FULL ERASE HEAD | A B C |
| | 15 | LP30958-001B | LOAD.GEAR BASE | A B C |
| | 16 | QYTPST2620Z | TAP SCREW,X2,L.G.BASE | A B C |
| | 18 | LP40798-001A | LOAD.GEAR(SUPPLY) ASSY | A B C |
| | 18A | LP21040-001A | LOAD.GEAR(SUPPLY) | A B C |
| | 18B | LP40799-001A | LOAD.ARM(SUPPLY) ASSY | A B C |
| | 19 | LP40837-001A | TORSION SPRING(S),L.GEAR(S) | A B C |
| | 20 | LP40903-002B | FIXING PLATE | A B C |
| | 21 | LP40806-001D | POLE BASE ASSY(SUPPLY) | A B C |
| | 22 | LP30959-002B | LOAD GEAR | A B C |
| | 23 | LP40802-001C | LOAD.GEAR(TAKE UP) ASSY | A B C |
| | 23A | LP21041-001D | LOAD.GEAR(TAKE UP) | A B C |
| | 23B | LP40803-001A | LOAD.ARM(TAKE UP) ASSY | A B C |
| | 24 | LP40838-001A | TORSION SPRING(T),L.GEAR(T) | A B C |
| | 26 | LP40808-001E | POLE BASE ASSY(TAKE UP) | A B C |
| | 30 | LP31020-004B | ARM BASE | A B C |
| | 31 | QYTDST2606Z | TAP SCREW | A B C |
| | 36 | LP21055-001F | TU LEVER | A B C |
| | 37 | LP40943-001A | TENSION SPRING | A B C |
| | 38 | LP40859-001D | T-UP HEAD | A B C |
| | 39 | LP30961-001C | LID GUIDE | A B C |
| | 42 | LP40810-001B | PINCH ROLLER ARM ASSY | A B C |
| | 44 | LP40840-001D | TORSION SPRING,P.ROLLER | A B C |
| | 46 | LP30963-001B | PRESS LEVER | A B C |
| | 47 | PQM30017-24 | SLIT WASHER,P.LEVER | A B C |
| | 48 | LP40930-002E | S-SWITCH | A B C |
| | 49 | LP40813-001D | GUIDE ARM ASSY | A B C |
| | 50 | LP40841-001A | TORSION SPRING,G.ARM | A B C |
| | 51 | LP30002-090A | SPACER,CAPSTAN MOTOR | A B C |
| | 52 | QAH0081-001 | AC HEAD | A B C |
| | 53 | LP30965-001A | HEAD BASE | A B C |
| | 55 | LP40842-001D | COMPRESSION SPRING | A B C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | A | B | C |
|---|---|---|---|---|---|---|
| | 56 | QYTDST2006M | TAP SCREW,A/C HEAD | A | B | C |
| | 57 | LP41036-001A | A/C ADJ.SCREW,X2,A/C HEAD | A | B | C |
| | 58 | QYTDST2606Z | TAP SCREW,X2,A/C HEAD | A | B | C |
| | 59 | QAR0023-001 | LOADING MOTOR | A | B | C |
| | 60 | QYTPSP3003Z | SCREW,X2,L.MOTOR | A | B | C |
| | 61 | LP21056-002J | MOTOR BRACKET | A | B | C |
| | 62 | QYTPST2620Z | TAP SCREW,M.BKT | A | B | C |
| | 63 | LP40814-001B | WORM BEARING | A | B | C |
| | 64 | LP21044-001E | CONTROL CAM | A | B | C |
| | 65 | PQM30017-24 | SLIT WASHER,CTL.CAM | A | B | C |
| | 66 | LP40815-001A | WORM GEAR | A | B | C |
| | 67 | LP40816-001B | HELICAL GEAR,M.BKT | A | B | C |
| | 68 | LP40817-001A | CONNECT GEAR | A | B | C |
| | 69 | LP10400-001J | CONTROL PLATE | A | B | C |
| | 70 | LP40843-001A | TORSION SPRING | A | B | C |
| | 71 | LP40818-001B | TENSION ARM ASSY | A | B | C |
| | 72 | LP40844-001E | TENSION SPRING,T.ARM | A | B | C |
| | 73 | LP21045-001D | TENSION ARM BASE | A | B | C |
| | 74 | LP40821-001A | TENSION BAND ASSY | A | B | C |
| | 75 | LP30967-001B | BAND HOLDER-1 | A | B | C |
| | 76 | LP30968-001C | BAND HOLDER-2 | A | B | C |
| | 77 | LP40822-002B | ADJUST PIN | A | B | C |
| | 78 | LP31000-005E | TENSION ARM LEVER | A | B | C |
| | 79 | LP21046-001C | MAIN BRAKE(TAKE UP) | A | B | C |
| | 80 | LP40824-001A | BAND BRAKE ASSY | A | B | C |
| | 81 | LP30969-002B | BRAKE LEVER | A | B | C |
| | 82 | LP30003-033B | TENSION SPRING,BRK LEVER | A | B | C |
| | 83 | LP30003-035B | TENSION SPRING,BRK LEVER | A | B | C |
| | 84 | LP40825-001B | CAPSTAN BRAKE ASSY | A | B | C |
| ⚠ | 85 | QAR0224-002 | CAPSTAN MOTOR | A | B | C |
| | 86 | QYTPSG2606Z | TAP SCREW,X3,CAP.MOTOR | A | B | C |
| | 87 | LP30005-010A | BELT,CAPSTAN MOTOR | A | B | C |
| | 88 | LP30970-001A | IDLER ARM | A | B | C |
| | 89 | LP40828-004A | IDLER GEAR 1,X2 | A | B | C |
| | 90 | LP40829-001B | IDLER GEAR 2,X2 | A | B | C |
| | 91 | LP31014-001A | WIRE HOLDER | A | B | C |
| | 93 | LP40934-001B | CLUTCH UNIT | A | B | C |
| | 94 | PQM30017-47 | SLIT WASHER,CLUT.UNIT | A | B | C |
| | 95 | LP30973-001A | DIRECT GEAR | A | B | C |
| | 96 | LP40939-001A | COMPRESION SPRING,DIR.GEAR | A | B | C |
| | 102 | LP30974-001C | CHANGE LEVER | A | B | C |
| | 105 | LP21049-001A | REEL DISK,X2 | A | B | C |
| | 107 | LP30017-004A | SPACER,X2,REEL DISK | A | B | C |
| | 110 | LP10401-001H | SIDE FRAME(L) | A | B | C |
| | 111 | LP10402-001K | SIDE FRAME(R) | A | B | C |
| | 112 | QYTDST2606Z | TAP SCREW,X2,FOR MECHA | A | B | C |
| | 113 | LP40917-001D | TORSION SPRING,FOR DUMP. | A | B | C |
| | 114 | LP30976-001E | SIDE PLATE | A | B | C |
| | 115 | LP30977-002D | LIMIT PLATE | A | B | C |
| | 116 | LP40846-001C | LIMIT SPRING,SIDE PLATE | A | B | C |
| | 117 | LP31100-001B | DRIVE LEVER | A | B | C |
| | 118 | LP30978-001B | DRIVE ARM(L) | A | B | C |
| | 119 | LP30979-001P | DRIVE ARM(R) | A | B | C |
| | 120 | LP40847-001B | TORSION SPRING,D.ARM(R) | A | B | C |
| | 121 | LP30980-001E | CONNECT PLATE | A | B | C |
| | 122 | LP10403-001C | SIDE HOLDER(L) | A | B | C |
| | 123 | LP10404-001E | SIDE HOLDER(R) | A | B | C |
| | 124 | LP30983-001B | LOCK LEVER(L) | A | B | C |
| | 125 | LP30984-001B | LOCK LEVER(R) | A | B | C |
| | 126 | LP40924-001D | TENSION SPRING,X2,L.LEVER | A | B | C |
| | 127 | LP40972-001A | EARTH SPRING(1) | A | B | C |
| | 128 | LP40857-001B | EARTH SPRING(2),TOP FRAME | A | B | C |
| | 130 | LP30981-001G | CASSETTE HOLDER ASSY | A | B | C |
| | 134 | LP21051-002C | REC SAFETY LEVER | A | B | C |
| | 137 | LP21052-001J | TOP FRAME | A | B | C |
| | 151 | LP30985-001G | DOOR OPENER,SIDE FRM(R) | A | B | C |
| | 161 | LP40993-001A | TAPE GUIDE | A | B | C |
| | WR1 | WJT0059-001D | E-CARD WIRE,CAP MOTOR | A | B | C |
| | WR2 | WJT0067-001B | E-CARD WIRE,A/C HEAD | A | B | C |
| | WR3 | WJS0022-001A | E-FL/RB WIRE,L.MOTOR | A | B | C |

**********

## MAIN BOARD ASSEMBLY<03>

**PW1 MAIN BOARD ASS'Y<03> includes the parts shown in the following.**
**PW1 3D D/2M BOARD ASS'Y<05>**
**PW1 TERMINAL BOARD ASS'Y<06>**
**PW1 DEMOD BOARD ASS'Y<14>**

| | | | | | | |
|---|---|---|---|---|---|---|
| PW1 | | LPA10170-09B | MAIN PWB ASSY,HR-S7960EX | A | | |
| PW1 | | LPA10170-08B | MAIN PWB ASSY,HR-S7965EF | | B | |
| PW1 | | LPA10170-12B | MAIN PWB ASSY,HR-S7965EK | | | C |
| IC1 | | JCP8051-MSA | IC,VIDEO | A | B | C |
| IC201 | | LC74776-9791 | IC | A | B | C |
| IC2201 | | AN3651FBP | IC | A | B | C |
| IC3001 | | HD6432194SBD35F | IC(MCU),MAIN CPU | A | | C |
| IC3001 | | HD6432194SAD36F | IC(MCU),MAIN CPU | | B | |
| IC3001 | or | HD64F2194CFD35 | IC(MCU),MAIN CPU | A | | C |
| IC3001 | or | HD64F2194CFD36 | IC(MCU),MAIN CPU | | B | |
| IC3002 | | IC-PST3427U-X | IC,RESET | A | B | C |
| IC3003 | | (*REFER TO BELOW) | IC,EEPROM(32K) | A | B | C |
| IC7002 | | GP1UM291QK | IR DETECT UNIT | A | B | C |
| Q1 | | 2SC4081/QRS/-X | TRANSISTOR,SP1 SHORT | A | B | C |
| Q1 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| Q2 | | 2SC4081/QRS/-X | TRANSISTOR,SP2 SHORT | A | B | C |
| Q2 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| Q3 | | 2SC4081/QRS/-X | TRANSISTOR,EP1 SHORT | A | B | C |
| Q3 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| Q4 | | 2SC4081/QRS/-X | TRANSISTOR,EP2 SHORT | A | B | C |
| Q4 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| Q7 | | 2SC4081/QRS/-X | TRANSISTOR,RF EQ(S) | A | B | C |
| Q7 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| Q8 | | 2SC4081/QRS/-X | TRANSISTOR,RF EQ(S) | A | B | C |
| Q8 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| Q9 | | 2SA1576A/QR/-X | TRANSISTOR,RF EQ(S) | A | B | C |
| Q9 | or | 2PA1576/R/-X | TRANSISTOR | A | B | C |
| Q10 | | 2SA1576A/QR/-X | TRANSISTOR,FSC BUF | A | B | C |
| Q10 | or | 2PA1576/R/-X | TRANSISTOR | A | B | C |
| Q14 | | 2SA1576A/QR/-X | TRANSISTOR,SECAM REC | | B | |
| Q14 | or | 2PA1576/R/-X | TRANSISTOR,S | | B | |
| Q16 | | DTC144WUA-X | DIGI TRANSISTOR,DEMP(SP/EP) | A | B | C |
| Q16 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| Q16 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| Q16 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| Q18 | | DTC144WUA-X | DIGI TRANSISTOR,SECAM | | B | |
| Q18 | or | UN521E-X | DIGI TRANSISTOR | | B | |
| Q18 | or | RN1309-X | DIGI TRANSISTOR | | B | |
| Q18 | or | PDTC144WU-X | DIGI TRANSISTOR | | B | |
| Q19 | | DTC144WUA-X | DIGI TRANSISTOR,SECAM | | B | |
| Q19 | or | UN521E-X | DIGI TRANSISTOR | | B | |
| Q19 | or | RN1309-X | DIGI TRANSISTOR | | B | |

* S7960EX : LPN0797-002B-02
S7965EF : LPN0798-001B-82
S7965EK : LPN0797-005B-03

The VCR goes to jig RCU mode after replacing the EEPROM and the VCR does not accept some RCU command.
Therefore please set the VCR to the user RCU mode after replacing the EEPROM.
The method of setting the VCR to the user RCU mode is written on the service manual.

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | | PART No. | PART NAME, DESCRIPTION | A | B | C |
|---|---|---|---|---|---|---|---|
| | Q19 | or | PDTC144WU-X | DIGI TRANSISTOR | | B | |
| | Q21 | | 2SA1576A/QR/-X | TRANSISTOR,PB C BUF | A | B | C |
| | Q21 | or | 2PA1576/R/-X | TRANSISTOR | A | B | C |
| | Q24 | | 2SA1576A/QR/-X | TRANSISTOR,2FSC BUF | A | B | C |
| | Q24 | or | 2PA1576/R/-X | TRANSISTOR | A | B | C |
| | Q25 | | DTC144WUA-X | DIGI TRANSISTOR,C.K.(3D) | A | B | C |
| | Q25 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q25 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q25 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q38 | | 2SC4081/QRS/-X | TRANSISTOR,Y BDL | A | B | C |
| | Q38 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| | Q41 | | DTC144WUA-X | DIGI TRANSISTOR,MESECAM | A | B | C |
| | Q41 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q41 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q41 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q50 | | DTC144WUA-X | DIGI TRANSISTOR,EE(L) | A | B | C |
| | Q50 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q50 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q50 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q207 | | 2SA1576A/QR/-X | TRANSISTOR,OSD OUT | A | B | C |
| | Q207 | or | 2PA1576/R/-X | TRANSISTOR,OSD OUT | A | B | C |
| | Q208 | | 2SC4081/QRS/-X | TRANSISTOR,OSD OUT | A | B | C |
| | Q208 | or | 2PC4081/R/-X | TRANSISTOR,OSD OUT | A | B | C |
| | Q301 | | 2SB1218A/QR/-X | TRANSISTOR | | B | |
| | Q301 | or | 2SA1576A/QR/-X | TRANSISTOR | | B | |
| | Q301 | or | 2PA1576/R/-X | TRANSISTOR | | B | |
| | Q302 | | UN511E-X | DIGI TRANSISTOR | | B | |
| | Q302 | or | DTA144WUA-X | DIGI TRANSISTOR | | B | |
| | Q302 | or | RN2309-X | D TRANSISTOR | | B | |
| | Q302 | or | PDTA144WU-X | DIGI TRANSISTOR | | B | |
| | Q2001 | | 2SC4081/QRS/-X | TRANSISTOR | A | B | C |
| | Q2001 | or | 2SD1819A/QRS/-X | TRANSISTOR | A | B | C |
| | Q2001 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| | Q2002 | | 2SC4081/QRS/-X | TRANSISTOR | A | B | C |
| | Q2002 | or | 2SD1819A/QRS/-X | TRANSISTOR | A | B | C |
| | Q2002 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| | Q2003 | | DTA144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2003 | or | UN511E-X | DIGI TRANSISTOR | A | B | C |
| | Q2003 | or | RN2309-X | D TRANSISTOR | A | B | C |
| | Q2003 | or | PDTA144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2004 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2004 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2004 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2004 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2051 | | 2SC4081/QRS/-X | TRANSISTOR | A | B | C |
| | Q2051 | or | 2SD1819A/QRS/-X | TRANSISTOR | A | B | C |
| | Q2051 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| | Q2052 | | 2SA1576A/QR/-X | TRANSISTOR | A | B | C |
| | Q2052 | or | 2SB1218A/QR/-X | TRANSISTOR | A | B | C |
| | Q2052 | or | 2PA1576/R/-X | TRANSISTOR | A | B | C |
| | Q2053 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2053 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2053 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2053 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2054 | | 2SA1576A/QR/-X | TRANSISTOR | A | B | C |
| | Q2054 | or | 2SB1218A/QR/-X | TRANSISTOR | A | B | C |
| | Q2054 | or | 2PA1576/R/-X | TRANSISTOR | A | B | C |
| | Q2055 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2055 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2055 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2055 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2201 | | DTA144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2201 | or | PDTA144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2201 | or | UN511E-X | DIGI TRANSISTOR | A | B | C |
| | Q2201 | or | RN2309-X | D TRANSISTOR | A | B | C |
| | Q2202 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2202 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2202 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2202 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2203 | | 2SC4081/QRS/-X | TRANSISTOR | A | B | C |
| | Q2203 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| | Q2203 | or | 2SD1819A/QRS/-X | TRANSISTOR | A | B | C |
| | Q2204 | | 2SC4081/QRS/-X | TRANSISTOR | A | B | C |
| | Q2204 | or | 2PC4081/R/-X | TRANSISTOR | A | B | C |
| | Q2204 | or | 2SD1819A/QRS/-X | TRANSISTOR | A | B | C |
| | Q2251 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2251 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2251 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2251 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2252 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2252 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2252 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2252 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2253 | | DTC144WUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2253 | or | PDTC144WU-X | DIGI TRANSISTOR | A | B | C |
| | Q2253 | or | UN521E-X | DIGI TRANSISTOR | A | B | C |
| | Q2253 | or | RN1309-X | DIGI TRANSISTOR | A | B | C |
| | Q2254 | | DTC114EUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2254 | or | PDTC114EU-X | DIGI TRANSISTOR | A | B | C |
| | Q2254 | or | UN5211-X | DIGI TRANSISTOR | A | B | C |
| | Q2254 | or | RN1302-X | DIGI TRANSISTOR | A | B | C |
| | Q2255 | | DTC114EUA-X | DIGI TRANSISTOR | A | B | C |
| | Q2255 | or | PDTC114EU-X | DIGI TRANSISTOR | A | B | C |
| | Q2255 | or | UN5211-X | DIGI TRANSISTOR | A | B | C |
| | Q2255 | or | RN1302-X | DIGI TRANSISTOR | A | B | C |
| | Q3002 | | PTZ-NV16A | IC(PHOTO SENSOR),STA.SENSOR | A | B | C |
| | Q3003 | | PTZ-NV16A | IC(PHOTO SENSOR),END SENSOR | A | B | C |
| | Q3004 | | 2SD1819A/QRS/-X | TRANSISTOR,POWER DET | A | B | C |
| | Q3004 | or | 2SC4081/QRS/-X | TRANSISTOR,POWER DET | A | B | C |
| | Q3004 | or | 2PC4081/R/-X | TRANSISTOR,POWER DET | A | B | C |
| | Q3005 | | 2SD1819A/QRS/-X | TRANSISTOR,SVCC | A | B | C |
| | Q3005 | or | 2SC4081/QRS/-X | TRANSISTOR,SVCC | A | B | C |
| | Q3005 | or | 2PC4081/R/-X | TRANSISTOR,SVCC | A | B | C |
| | Q3007 | | UN521E-X | DIGI TRANSISTOR,P50 | A | B | C |
| | Q3007 | or | DTC144WUA-X | DIGI TRANSISTOR,P50 | A | B | C |
| | Q3007 | or | PDTC144WU-X | DIGI TRANSISTOR,P50 | A | B | C |
| | Q3007 | or | RN1309-X | DIGI TRANSISTOR,P50 | A | B | C |
| | Q4001 | | UN5211-X | DIGI TRANSISTOR | A | B | C |
| | Q4001 | or | DTC114EUA-X | DIGI TRANSISTOR | A | B | C |
| | Q4001 | or | RN1302-X | DIGI TRANSISTOR | A | B | C |
| | Q4001 | or | PDTC114EU-X | DIGI TRANSISTOR | A | B | C |
| | Q5101 | | 2SK2632-CB14 | POWER MOS FET | A | B | C |
| | Q5101 | or | 2SK2129-LT | POWER MOS FET | A | B | C |
| | Q5101 | or | 2SK2632 | POWER MOS FET | A | B | C |
| | Q5101 | or | 2SK2129 | POWER MOS FET | A | B | C |
| | Q5102 | | 2SD2144S/UV/-T | TRANSISTOR | A | B | C |
| | Q5301 | | 2SC1740S/RS/-T | TRANSISTOR | A | B | C |
| | Q5301 | or | 2SC3199/YG/-T | TRANSISTOR | A | B | C |
| | Q5303 | | 2SC5739/QP/ | POW TRANSISTOR,SW5V | A | B | C |
| | Q5304 | | 2SD2144S/UV/-T | TRANSISTOR,SW12V | A | B | C |
| | Q5305 | | DTA114EUA-X | DIGI TRANSISTOR,SW12V | A | B | C |
| | Q5305 | or | UN5111-X | DIGI TRANSISTOR,SW12V | A | B | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | Q5305 or | RN2302-X | D TRANSISTOR,SW12V | | A | B | C |
| | Q5305 or | PDTA114EU-X | DIGI TRANSISTOR,SW12V | | A | B | C |
| | Q5306 | DTC114EUA-X | DIGI TRANSISTOR,SW12V | | A | B | C |
| | Q5306 or | UN5211-X | DIGI TRANSISTOR,SW12V | | A | B | C |
| | Q5306 or | RN1302-X | DIGI TRANSISTOR,SW12V | | A | B | C |
| | Q5306 or | PDTC114EU-X | DIGI TRANSISTOR,SW12V | | A | B | C |
| | Q5307 | 2SD2144S/UV/-T | TRANSISTOR,RF5V | | A | B | C |
| | Q6030 | 2SB1218A/QR/-X | TRANSISTOR,V BUFF | | A | B | C |
| | Q6030 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q6030 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q6031 | DTC114EUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q6031 or | UN5211-X | DIGI TRANSISTOR | | A | B | C |
| | Q6031 or | RN1302-X | DIGI TRANSISTOR | | A | B | C |
| | Q6031 or | PDTC114EU-X | DIGI TRANSISTOR | | A | B | C |
| | Q6032 | DTC114EUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q6032 or | UN5211-X | DIGI TRANSISTOR | | A | B | C |
| | Q6032 or | RN1302-X | DIGI TRANSISTOR | | A | B | C |
| | Q6032 or | PDTC114EU-X | DIGI TRANSISTOR | | A | B | C |
| | Q7001 | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7001 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7001 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7002 | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7002 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7002 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7003 | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7003 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7003 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7004 | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7004 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7004 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7005 | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7005 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7005 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7006 | 2SB1218A/QR/-X | TRANSISTOR,V15 7SEG | | A | B | C |
| | Q7006 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7006 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7007 | 2SB1218A/QR/-X | TRANSISTOR,V15 7SEG | | A | B | C |
| | Q7007 or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q7007 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q7008 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7008 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7009 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7009 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7010 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7010 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7011 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7011 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7012 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7012 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7013 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7013 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7014 | DTC143TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q7014 or | UN5216-X | D TRANSISTOR | | A | B | C |
| | Q7201 | 2SC1317/RS/-T | TRANSISTOR | | A | B | C |
| | D1 | QUY153-050Y | IM BUS WIRE,ESD | | A | B | C |
| | D201 | QRE141J-152Y | C RESISTOR,OSD CS | 1.5kΩ,1/4W | A | B | C |
| | D202 | QRE141J-101Y | C RESISTOR,S.CLK | 100Ω,1/4W | A | B | C |
| | D203 | QRE141J-101Y | C RESISTOR,S.DATA | 100Ω,1/4W | A | B | C |
| | D2251 | 1SS133-T2 | SI DIODE | | A | B | C |
| | D2251 or | 1SS270A-T2 | SI DIODE | | A | B | C |
| | D3001 | LNB2301L01VI | IR LED,LED | | A | B | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | D3002 | 1SS133-T2 | SI DIODE | | A | B | C |
| | D3002 or | 1SS270A-T2 | SI DIODE | | A | B | C |
| | D3003 | RD39ES/B3/-T2 | Z DIODE,POWER DET | | A | B | C |
| | D3003 or | MTZJ39C-T2 | Z DIODE,POWER DET | | A | B | C |
| | D3004 | 11ES2-T2 | SI DIODE,BU5V | | A | B | C |
| | D3004 or | 1A3G-T2 | SI DIODE,BU5V | | A | B | C |
| | D3005 | 11ES2-T2 | SI DIODE,AL5V | | A | B | C |
| | D3005 or | 1A3G-T2 | SI DIODE,AL5V | | A | B | C |
| | D3008 | 1SS355-X | SI DIODE,P50 | | A | B | C |
| | D4001 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | D4002 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | D5001 | S1WB/A/60-4102 | BRIDGE DIODE | | A | B | C |
| | D5001 or | S1WB/A/60-X | BRIDGE DIODE | | A | B | C |
| | D5001 or | S1WB(A)60F4072X | BRIDGE DIODE | | A | B | C |
| | D5101 | AU01-T2 | SI DIODE | | A | B | C |
| | D5101 or | 1SR153-400-T2 | FR DIODE | | A | B | C |
| | D5101 or | ERA18-04-T2 | FR DIODE | | A | B | C |
| | D5101 or | 10ELS4-T2 | FR DIODE | | A | B | C |
| | D5102 | AU01-T2 | SI DIODE | | A | B | C |
| | D5102 or | 1SR153-400-T2 | FR DIODE | | A | B | C |
| | D5102 or | ERA18-04-T2 | FR DIODE | | A | B | C |
| | D5102 or | 10ELS4-T2 | FR DIODE | | A | B | C |
| | D5103 | 1SS133-T2 | SI DIODE | | A | B | C |
| | D5103 or | 1SS270A-T2 | SI DIODE | | A | B | C |
| | D5105 | 1SS133-T2 | SI DIODE | | A | B | C |
| | D5105 or | 1SS270A-T2 | SI DIODE | | A | B | C |
| | D5203 | AU01Z-T2 | FR DIODE | | A | B | C |
| | D5203 or | 10ELS2-T2 | FR DIODE | | A | B | C |
| | D5204 | AU01Z-T2 | FR DIODE | | A | B | C |
| | D5204 or | 10ELS2-T2 | FR DIODE | | A | B | C |
| | D5207 | AK04-T2 | SB DIODE,6V | | A | B | C |
| | D5207 or | 11EQS04-T2 | SB DIODE,6V | | A | B | C |
| | D5207 or | 1S4-T2 | SB DIODE,6V | | A | B | C |
| | D5207 or | SBO40-T2 | SB DIODE,6V | | A | B | C |
| | D5209 | AK04-T2 | SB DIODE,6V | | A | B | C |
| | D5209 or | 11EQS04-T2 | SB DIODE,6V | | A | B | C |
| | D5209 or | 1S4-T2 | SB DIODE,6V | | A | B | C |
| | D5209 or | SBO40-T2 | SB DIODE,6V | | A | B | C |
| | D5210 | AU01Z-T2 | FR DIODE,BT2 | | A | B | C |
| | D5210 or | ERA18-02-T2 | FR DIODE,BT2 | | A | B | C |
| | D5210 or | 1SR153-400-T2 | FR DIODE,BT2 | | A | B | C |
| | D5210 or | 10ELS2-T2 | FR DIODE,BT2 | | A | B | C |
| | D5210 or | PG104RS-T2 | FR DIODE,BT2 | | A | B | C |
| | D5301 | MTZJ15C-T2 | Z DIODE | | A | B | C |
| | D5301 or | RD15ES/B3/-T2 | Z DIODE | | A | B | C |
| | D5302 | MTZJ11C-T2 | Z DIODE,SW12V | | A | B | C |
| | D5302 or | RD11ES/B3/-T2 | Z DIODE,SW12V | | A | B | C |
| | D5303 | MTZJ5.6A-T2 | Z DIODE | | A | B | C |
| | D5303 or | RD5.6ES/B1/-T2 | Z DIODE | | A | B | C |
| | D5305 | MTZJ5.6C-T2 | Z DIODE,SW5V | | A | B | C |
| | D5305 or | RD5.6ES/B3/-T2 | Z DIODE,SW5V | | A | B | C |
| | D6002 | HZ30-2L-T2 | Z.DIODE | | A | B | C |
| | D6002 or | HZ30-2LTD | Z DIODE (M) | | A | B | C |
| | D7051 | 1SS133-T2 | SI DIODE,ESD | | A | B | C |
| | D7051 or | 1SS270A-T2 | SI DIODE,ESD | | A | B | C |
| | R1 | NRSA02J-622X | MG RESISTOR | 6.2kΩ,1/10W | A | B | C |
| | R2 | NRSA02J-152X | MG RESISTOR | 1.5kΩ,1/10W | A | B | C |
| | R3 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A | B | C |
| | R5 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | R6 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | A | B | C |
| | R7 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A | B | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | | A B C |
|---|---|---|---|---|
| R10 | QRE141J-103Y | C RESISTOR | 10kΩ,1/4W | A B C |
| R21 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R22 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R23 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | B |
| R25 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R26 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R27 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A B C |
| R28 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A B C |
| R29 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | A B C |
| R30 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | B |
| R31 | NRSA02J-152X | MG RESISTOR | 1.5kΩ,1/10W | A B C |
| R32 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R35 | NDC21HJ-470X | C CAPACITOR | 47pF,50V | A B C |
| R36 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A B C |
| R38 | NRSA02J-392X | MG RESISTOR | 3.9kΩ,1/10W | A B C |
| R40 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R41 | NRSA02J-104X | MG RESISTOR | 100kΩ,1/10W | A B C |
| R42 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A B C |
| R46 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R48 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R51 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A B C |
| R52 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A |
| R52 | NQR0360-003X | FERRITE BEADS | | B |
| R65 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | B |
| R68 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | B |
| R76 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | B |
| R77 | NRSA02J-223X | MG RESISTOR | 22kΩ,1/10W | A B C |
| R78 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |
| R84 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R88 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R90 | NRSA02J-391X | MG RESISTOR | 390Ω,1/10W | A B C |
| R93 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A B C |
| R104 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R117 | NRSA02J-104X | MG RESISTOR | 100kΩ,1/10W | A B C |
| R118 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R201 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R202 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R208 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A B C |
| R209 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R210 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A B C |
| R211 | NRSA02J-562X | MG RESISTOR | 5.6kΩ,1/10W | A B C |
| R212 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R213 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R216 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R224 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R225 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R226 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R301 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | B |
| R302 | NRSA02J-124X | MG RESISTOR | 120kΩ,1/10W | B |
| R303 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | B |
| R304 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | B |
| R305 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | B |
| R306 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | B |
| R307 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | B |
| R308 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | B |
| R309 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | B |
| R310 | NRSA02J-223X | MG RESISTOR | 22kΩ,1/10W | B |
| R311 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | B |
| R312 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | B |
| R313 | NRSA02J-223X | MG RESISTOR | 22kΩ,1/10W | B |
| R314 | NRVA02D-243X | CMF RESISTOR | 24kΩ,1/10W | B |
| R315 | NRSA02J-564X | MG RESISTOR | 560kΩ,1/10W | B |
| R316 | NRSA02J-124X | MG RESISTOR | 120kΩ,1/10W | B |
| R318 | NRSA02J-821X | MG RESISTOR | 820Ω,1/10W | B |
| R329 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | B |
| R2041 | QRE141J-0R0 | C RESISTOR | 0Ω,1/4W | A B C |
| R2003 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R2005 | NRSA02J-153X | MG RESISTOR | 15kΩ,1/10W | A B C |
| R2007 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R2008 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R2010 | NRSA02J-123X | MG RESISTOR | 12kΩ,1/10W | A B C |
| R2013 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2014 | NRSA02J-224X | MG RESISTOR | 220kΩ,1/10W | A B C |
| R2015 | NRSA02J-181X | MG RESISTOR | 180Ω,1/10W | A B C |
| R2016 | NRSA02J-393X | MG RESISTOR | 39kΩ,1/10W | A B C |
| R2017 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R2018 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2019 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2020 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2053 | NRSA02J-392X | MG RESISTOR | 3.9kΩ,1/10W | A B C |
| R2054 | NRSA02J-123X | MG RESISTOR | 12kΩ,1/10W | A B C |
| R2055 | NRSA02J-3R3X | MG RESISTOR | 3.3Ω,1/10W | A B C |
| R2056 | QRE141J-820Y | C RESISTOR | 82Ω,1/4W | A B C |
| R2057 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2058 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R2059 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2060 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R2201 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2202 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2203 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2204 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2205 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2206 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2207 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2208 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2209 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A B C |
| R2210 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2211 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |
| R2212 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |
| R2213 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2214 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A B C |
| R2215 | NRSA02J-181X | MG RESISTOR | 180Ω,1/10W | A B C |
| R2216 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A C |
| R2217 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A C |
| R2218 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A B C |
| R2219 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A B C |
| R2220 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R2222 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2223 | NRSA02J-511X | MG RESISTOR | 510Ω,1/10W | A B C |
| R2224 | NRSA02J-511X | MG RESISTOR | 510Ω,1/10W | A B C |
| R2225 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2226 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | A B C |
| R2227 | NRSA02J-393X | MG RESISTOR | 39kΩ,1/10W | A B C |
| R2228 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | A B C |
| R2229 | NRSA02J-393X | MG RESISTOR | 39kΩ,1/10W | A B C |
| R2230 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2231 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2232 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A B C |
| R2233 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R2234 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R2235 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A B C |
| R2236 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | | A B C |
|---|---|---|---|---|
| R2237 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A B C |
| R2238 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |
| R2251 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R2252 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A B C |
| R2253 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R2254 | QRE141J-103Y | C RESISTOR | 10kΩ,1/4W | A B C |
| R2255 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | A B C |
| R2256 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A B C |
| R3011 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3012 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | B |
| R3013 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3014 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3015 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3016 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3017 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3018 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R3019 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3020 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3021 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3022 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3025 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3026 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3027 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3029 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3030 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3031 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3033 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3034 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3035 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3036 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3037 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3038 | NRSA02J-152X | MG RESISTOR | 1.5kΩ,1/10W | A B C |
| R3039 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3040 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3041 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3042 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3044 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3046 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3047 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3048 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3049 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3050 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3051 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3052 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R3053 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R3054 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3055 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3056 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3057 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3058 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3059 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3060 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3061 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3062 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3063 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3066 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3069 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R3071 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3072 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3073 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3074 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3075 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R3076 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R3077 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3078 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3079 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3080 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R3081 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3083 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3085 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3086 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3087 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3088 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3089 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3090 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3091 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3092 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3093 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3094 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3095 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3096 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3097 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3103 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3105 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3106 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R3205 | QRE141J-181Y | C RESISTOR | 180Ω,1/4W | A B C |
| R3206 | NRSA02J-123X | MG RESISTOR | 12kΩ,1/10W | A B C |
| R3207 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R3208 | NRSA02J-121X | MG RESISTOR | 120Ω,1/10W | A B C |
| R3209 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R3210 | NRSA02J-121X | MG RESISTOR | 120Ω,1/10W | A B C |
| R3211 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | A B C |
| R3212 | NRSA02J-474X | MG RESISTOR | 470kΩ,1/10W | A B C |
| R3213 | NRSA02J-334X | MG RESISTOR | 330kΩ,1/10W | A B C |
| R3214 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3215 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3216 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3217 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3218 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3219 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3220 | NRSA02J-104X | MG RESISTOR | 100kΩ,1/10W | A B C |
| R3222 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3223 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3224 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3225 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3229 | NRSA02J-105X | MG RESISTOR | 1MΩ,1/10W | A B C |
| R3230 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3231 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R3234 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3235 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A B C |
| R3236 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A B C |
| R3237 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3238 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3241 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R3242 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R3252 | NRSA02J-153X | MG RESISTOR | 15kΩ,1/10W | A B C |
| R3253 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R4003 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | A B C |
| R4004 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | A B C |
| R4005 | NRSA02J-562X | MG RESISTOR | 5.6kΩ,1/10W | A B C |
| R4007 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R4008 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | | A B C |
|---|---|---|---|---|
| R4009 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R4010 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R4012 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A B C |
| R4013 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A B C |
| R4015 | NRSA02J-562X | MG RESISTOR | 5.6kΩ,1/10W | A B C |
| R4017 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R5101 | QRE141J-224Y | C RESISTOR | 220kΩ,1/4W | A B C |
| R5102 | QRE141J-224Y | C RESISTOR | 220kΩ,1/4W | A B C |
| R5103 | QRE141J-683Y | C RESISTOR | 68kΩ,1/4W | A B C |
| R5104 | QRG02GJ-683 | OMF RESISTOR | 68kΩ,2W | A B C |
| R5106 | QRT01DJ-R39X | MF RESISTOR | 0.39Ω,1W | A B C |
| R5107 | QRE121J-331Y | C RESISTOR | 330Ω,1/2W | A B C |
| R5108 | NRSA02J-152X | MG RESISTOR | 1.5kΩ,1/10W | A B C |
| R5109 | QRE141J-561Y | C RESISTOR | 560Ω,1/4W | A B C |
| R5110 | NRSA02J-224X | MG RESISTOR | 220kΩ,1/10W | A B C |
| R5111 | NRSA02J-391X | MG RESISTOR | 390Ω,1/10W | A B C |
| R5112 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A B C |
| R5302 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R5303 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A B C |
| R5304 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A B C |
| R5306 | NRSA02J-181X | MG RESISTOR | 180Ω,1/10W | A B C |
| R5310 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R5312 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R5313 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R5319 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A B C |
| R5332 | QRL02DJ-391X | OMF RESISTOR | 390Ω,2W | A B C |
| R6020 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R6021 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R6030 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R6031 | NRSA02J-271X | MG RESISTOR | 270Ω,1/10W | A B C |
| R6032 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A C |
| R6032 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | B |
| R6033 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A C |
| R6033 | NRSA02J-183X | MG RESISTOR | 18kΩ,1/10W | B |
| R6050 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A C |
| R6051 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A C |
| R6052 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A C |
| R6056 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A C |
| R6080 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R7001 | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A B C |
| R7002 | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A B C |
| R7003 | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A B C |
| R7004 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R7005 | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A B C |
| R7006 | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A B C |
| R7007 | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A B C |
| R7015 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A B C |
| R7020 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R7021 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A B C |
| R7022 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A B C |
| R7023 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A B C |
| R7024 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |
| R7025 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R7026 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A B C |
| R7030 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A B C |
| R7031 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A B C |
| R7032 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A B C |
| R7033 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A B C |
| R7034 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A B C |
| R7160 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R7161 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R7162 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A B C |
| R7163 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A B C |
| R7202 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A B C |
| R7203 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A B C |
| R7204 | QRE121J-100Y | C RESISTOR | 10Ω,1/2W | A B C |
| VR2251 | QVP0039-223Z | TRIM RESISTOR | | A B C |
| B5 | NRSA02J-0R0X | MG RESISTOR,PB FM BUF | 0Ω,1/10W | A B C |
| B10 | NRSA02J-0R0X | MG RESISTOR,C IN(SVHS) | 0Ω,1/10W | A B C |
| B13 | QUY160-180Y | IM BUS WIRE,V.REF | | A B C |
| B65 | NRSA02J-0R0X | MG RESISTOR,TITLE REC | 0Ω,1/10W | A B C |
| B203 | QUY160-100Y | IM BUS WIRE,I2C CLK2 | | A B C |
| B204 | QUY160-080Y | IM BUS WIRE,I2C DATA2 | | A B C |
| B214 | NRSA02J-0R0X | MG RESISTOR,RF VIDEO | 0Ω,1/10W | A B C |
| B302 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | B |
| B2051 | QUY160-060Y | IM BUS WIRE | | A B C |
| B2221 | QUY160-140Y | IM BUS WIRE,AL5V | | A B C |
| B3001 | QUY160-060Y | IM BUS WIRE,ICT | | A B C |
| B5001 | QUY160-100Y | IM BUS WIRE,OPT:LF5001 | | A B C |
| B5002 | QUY160-100Y | IM BUS WIRE,OPT:LF5001 | | A B C |
| C1 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C3 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C4 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C5 | QEKC0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C6 | QDYB1CM-103Y | C CAPACITOR | 0.01µF,16V | A B C |
| C7 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | A B C |
| C8 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C9 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A B C |
| C10 | NDC21HJ-151X | C CAPACITOR | 150pF,50V | A B C |
| C11 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C12 | NDC21HJ-8R0X | C CAPACITOR | 8pF,50V | A B C |
| C14 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C15 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C16 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C17 | QEKJ1HM-335Z | E CAPACITOR | 3.3µF,50V | A B C |
| C19 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A B C |
| C20 | QEPF1HM-105Z | BP E CAPACITOR | 1µF,50V | A B C |
| C21 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C22 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C23 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C24 | QCBB1HK-104Y | C CAPACITOR | 0.1µF,50V | A B C |
| C25 | NDC21HJ-6R0X | C CAPACITOR | 6pF,50V | A B C |
| C26 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C27 | NCB21HK-223X | C CAPACITOR | 0.022µF,50V | A B C |
| C28 | QEKJ1HM-335Z | E CAPACITOR | 3.3µF,50V | A B C |
| C29 | NCB21EK-333X | C CAPACITOR | 0.033µF,25V | A B C |
| C30 | NCB21CK-474X | C CAPACITOR | 0.47µF,16V | A B C |
| C31 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C32 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C33 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A B C |
| C34 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C35 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C36 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C37 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C38 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C40 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C44 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C45 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C53 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C59 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C61 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | | A B C |
|---|---|---|---|---|
| C63 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C64 | NDC21HJ-220X | C CAPACITOR | 22pF,50V | A B C |
| C65 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C69 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C70 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C72 | NDC21HJ-470X | C CAPACITOR | 47pF,50V | A B C |
| C73 | NDC21HJ-120X | C CAPACITOR | 12pF,50V | A B C |
| C78 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C80 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C84 | NRSA02J-153X | MG RESISTOR | 15kΩ,1/10W | A B C |
| C92 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A B C |
| C103 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C106 | NCB21HK-821X | C CAPACITOR | 820pF,50V | A B C |
| C108 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A B C |
| C110 | NDC21HJ-820X | C CAPACITOR | 82pF,50V | A B C |
| C114 | NDC21HJ-181X | C CAPACITOR | 180pF,50V | A B C |
| C201 | QEKJ0JM-227Z | E CAPACITOR | 220µF,6.3V | A B C |
| C204 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C206 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A B C |
| C207 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A B C |
| C209 | NCB21CK-474X | C CAPACITOR | 0.47µF,16V | A B C |
| C210 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C211 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C212 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C213 | QERF1EM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C214 | NCB21CK-224X | C CAPACITOR | 0.22µF,16V | A B C |
| C215 | NCB21CK-224X | C CAPACITOR | 0.22µF,16V | A B C |
| C217 | NDC21HJ-560X | C CAPACITOR | 56pF,50V | A B C |
| C218 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C222 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C225 | QERF1AM-227Z | E CAPACITOR | 220µF,10V | A B C |
| C301 | NDC21HJ-151X | C CAPACITOR | 150pF,50V | B |
| C302 | NCB21CK-105X | C CAPACITOR | 1µF,16V | B |
| C303 | NCB21HK-682X | C CAPACITOR | 0.0068µF,50V | B |
| C304 | NCB21HK-682X | C CAPACITOR | 0.0068µF,50V | B |
| C305 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C306 | NCB21CK-105X | C CAPACITOR | 1µF,16V | B |
| C307 | NDC21HJ-151X | C CAPACITOR | 150pF,50V | B |
| C308 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C309 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | B |
| C310 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C311 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C312 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | B |
| C313 | NCB21CK-474X | C CAPACITOR | 0.47µF,16V | B |
| C315 | NCB21CK-105X | C CAPACITOR | 1µF,16V | B |
| C316 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C317 | NCB21HK-681X | C CAPACITOR | 680pF,50V | B |
| C318 | NCB21EK-223X | C CAPACITOR | 0.022µF,25V | B |
| C319 | NCB21CK-105X | C CAPACITOR | 1µF,16V | B |
| C320 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C321 | NDC21HG-301X | C CAPACITOR | 300pF,50V | B |
| C322 | NCB21CK-474X | C CAPACITOR | 0.47µF,16V | B |
| C323 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | B |
| C324 | NDC21HJ-390X | C CAPACITOR | 39pF,50V | B |
| C2001 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C2002 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C2003 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C2005 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C2006 | NCB21HK-123X | C CAPACITOR | 0.012µF,50V | A B C |
| C2007 | QEKJ1CM-226Z | E CAPACITOR | 22µF,16V | A B C |
| C2008 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | | A B C |
|---|---|---|---|---|
| C2009 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | A B C |
| C2010 | NCB21HK-152X | C CAPACITOR | 0.0015µF,50V | A B C |
| C2011 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C2012 | QEKC1HM-475Z | E CAPACITOR | 4.7µF,50V | A B C |
| C2013 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A B C |
| C2017 | NCB21HK-682X | C CAPACITOR | 0.0068µF,50V | A B C |
| C2051 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A B C |
| C2053 | NCB21HK-472X | C CAPACITOR | 0.0047µF,50V | A B C |
| C2054 | NCB21EK-223X | C CAPACITOR | 0.022µF,25V | A B C |
| C2055 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2061 | QFV91HJ-823Z | MF CAPACITOR | 0.082µF,50V | A B C |
| C2201 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2202 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C2203 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A B C |
| C2204 | QEKJ0JM-336Z | E CAPACITOR | 33µF,6.3V | A B C |
| C2205 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2206 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2207 | NCB21HK-153X | C CAPACITOR | 0.015µF,50V | A B C |
| C2208 | NCB21HK-153X | C CAPACITOR | 0.015µF,50V | A B C |
| C2209 | QERF1CM-106Z | E CAPACITOR | 10µF,16V | A B C |
| C2210 | QERF1CM-106Z | E CAPACITOR | 10µF,16V | A B C |
| C2211 | QEKJ0JM-336Z | E CAPACITOR | 33µF,6.3V | A B C |
| C2212 | QERF0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C2214 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2215 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2216 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | A B C |
| C2218 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A C |
| C2219 | QEKJ1CM-226Z | E CAPACITOR | 22µF,16V | A C |
| C2220 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2221 | NCB21EK-223X | C CAPACITOR | 0.022µF,25V | A B C |
| C2222 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2223 | NCB21EK-473X | C CAPACITOR | 0.047µF,25V | A B C |
| C2224 | NCB21EK-473X | C CAPACITOR | 0.047µF,25V | A B C |
| C2225 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C2226 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A B C |
| C2227 | QERF1CM-106Z | E CAPACITOR | 10µF,16V | A B C |
| C2230 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2231 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A B C |
| C2251 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2252 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2253 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2254 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C2255 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2256 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2257 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A B C |
| C2258 | NDC21HJ-181X | C CAPACITOR | 180pF,50V | A B C |
| C2259 | QEKJ1HM-334Z | E CAPACITOR | 0.33µF,50V | A B C |
| C2261 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C2262 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C3008 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C3011 | QETL0JM-338 | E CAPACITOR | 3300µF,6.3V | A B C |
| C3012 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C3014 | QERF0JM-476Z | E CAPACITOR | 47µF,6.3V | A B C |
| C3015 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C3016 | NCB21EK-473X | C CAPACITOR | 0.047µF,25V | A B C |
| C3020 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C3021 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A B C |
| C3022 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A B C |
| C3024 | NDC21HJ-220X | C CAPACITOR | 22pF,50V | A |
| C3024 | NDC21HJ-120X | C CAPACITOR | 12pF,50V | B C |
| C3025 | QAT3725-300Z | TRIM CAPACITOR | | A |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | C3026 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C3027 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | B | C |
| | C3030 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C3031 | NCB21EK-473X | C CAPACITOR | 0.047µF,25V | A | B | C |
| | C3033 | NCB21EK-473X | C CAPACITOR | 0.047µF,25V | A | B | C |
| | C3036 | NDC21HJ-180X | C CAPACITOR | 18pF,50V | A | B | C |
| | C3037 | NDC21HJ-120X | C CAPACITOR | 12pF,50V | A | B | C |
| | C3040 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C3041 | NDC21HJ-150X | C CAPACITOR | 15pF,50V | | B | C |
| | C3050 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C3071 | QEKJ1CM-336Z | E CAPACITOR | 33µF,16V | A | B | C |
| | C4002 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C4004 | QEKJ1AM-226Z | E CAPACITOR | 22µF,10V | A | B | C |
| | C4005 | NCB21HK-222X | C CAPACITOR | 0.0022µF,50V | A | B | C |
| | C4006 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C4008 | NCB21AK-105X | C CAPACITOR | 1µF,10V | A | B | C |
| | C4009 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | C4010 | NCB21EK-223X | C CAPACITOR | 0.022µF,25V | A | B | C |
| | C4011 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C4012 | QERF1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C4014 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A | B | C |
| | C4015 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | A | B | C |
| | C4031 | QEKJ1CM-336Z | E CAPACITOR | 33µF,16V | A | B | C |
| ⚠ | C5001 | QFZ9072-473 | MM CAPACITOR | 0.047µF,125V | A | B | C |
| ⚠ | C5004 | QCZ9071-222 | C CAPACITOR | 0.0022µF,250V | A | B | C |
| | C5006 | QEZ0375-686 | E CAPACITOR | 68µF,400V | A | B | C |
| | C5101 | QCZ0212-472 | C CAPACITOR | 0.0047µF,1kV | A | B | C |
| | C5102 | QCZ0302-330Z | C CAPACITOR | 33pF,1kV | A | B | C |
| | C5104 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C5105 | QFN31HJ-153Z | M CAPACITOR | 0.015µF,50V | A | B | C |
| | C5106 | QCBB1HJ-271Y | C CAPACITOR | 270pF,50V | A | B | C |
| | C5107 | QFV91HJ-104Z | MF CAPACITOR | 0.1µF,50V | A | B | C |
| | C5202 | QETN1CM-108Z | E CAPACITOR | 1000µF,16V | A | B | C |
| | C5203 | QEMT1AM-128 | E CAPACITOR | 1200µF,10V | A | B | C |
| | C5204 | QETJ2AM-475Z | E CAPACITOR | 4.7µF,10V | A | B | C |
| | C5206 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | A | B | C |
| | C5207 | QEKJ1CM-107Z | E CAPACITOR | 100µF,16V | A | B | C |
| | C5301 | QEKJ1CM-107Z | E CAPACITOR | 100µF,16V | A | B | C |
| | C5303 | QEKJ1CM-107Z | E CAPACITOR | 100µF,16V | A | B | C |
| | C5305 | QFVF1HJ-274Z | MF CAPACITOR | 0.27µF,50V | A | B | C |
| | C5307 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | A | B | C |
| | C5308 | QEKJ1CM-107Z | E CAPACITOR | 100µF,16V | A | B | C |
| | C6008 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | | B | |
| | C6013 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C6032 | NCB21EK-473X | C CAPACITOR | 0.047µF,25V | A | | C |
| | C6037 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | B | C |
| | C6055 | NDC21HJ-220X | C CAPACITOR | 22pF,50V | A | | C |
| | C6056 | NDC21HJ-470X | C CAPACITOR | 47pF,50V | A | | C |
| | C6501 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | | C |
| | C6501 | QEKJ0JM-227Z | E CAPACITOR | 220µF,6.3V | | B | |
| | C6502 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C7011 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C7165 | NCB21HK-681X | C CAPACITOR | 680pF,50V | A | B | C |
| | C7167 | NCB21HK-681X | C CAPACITOR | 680pF,50V | A | B | C |
| | C7202 | QETJ0JM-477Z | E CAPACITOR | 470µF,6.3V | A | B | C |
| | L1 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L2 | QQL071J-121Y | INDUCTOR | 120µH | A | B | C |
| | L3 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L4 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L5 | QQR0521-012Z | NOISE FILTER | | A | B | C |
| | L12 | QQR0967-001 | CHOKE COIL | 12µH | A | B | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | L13 | QQL071J-330Y | INDUCTOR | 33µH | A | B | C |
| | L15 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L18 | QQL071J-220Y | INDUCTOR | 22µH | A | B | C |
| | L19 | QQL071J-120Y | INDUCTOR | 12µH | A | B | C |
| | L20 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L22 | QQL231J-1R0Y | INDUCTOR | 1.0µH | A | B | C |
| | L24 | QQL071J-270Y | INDUCTOR | 27µH | A | B | C |
| | L27 | QQL071J-330Y | INDUCTOR | 33µH | A | B | C |
| | L28 | QQL071J-680Y | INDUCTOR | 68µH | A | B | C |
| | L201 | QQL29BK-1R0Z | P COIL | 1.0µH | A | B | C |
| | L202 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L203 | QQL29BJ-220Z | P COIL | 22µH | A | B | C |
| | L204 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L206 | QQL071J-220Y | INDUCTOR | 22µH | A | B | C |
| | L301 | QQL29BJ-100Z | P COIL | 10µH | | B | |
| | L302 | QQL231J-6R8Y | INDUCTOR | 6.8µH | | B | |
| | L303 | QQL231J-270Y | INDUCTOR | 27µH | | B | |
| | L304 | QQL29BJ-101Z | P COIL | 100µH | | B | |
| | L2001 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L2201 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L2251 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L2252 | QQL29BJ-151Z | P COIL | 150µH | A | B | C |
| | L4001 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L5201 | PELN1184 | CHOKE COIL | 33µH | A | B | C |
| | L5202 | PELN1184 | CHOKE COIL | 33µH | A | B | C |
| | L6001 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L6002 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L6501 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L7201 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| ⚠ | CP3001 | QMFZ050-1R5X-E | FUSE | T1.5A,125V | A | B | C |
| ⚠ | CP4001 | QMFZ050-1R5X-E | FUSE | T1.5A,125V | A | B | C |
| | DI7001 | LTG-0126M-03J | LED | | A | B | C |
| | FC5001 | QNG0006-001Z | FUSE CLIP,FOR F5001 | | A | B | C |
| | FC5002 | QNG0006-001Z | FUSE CLIP,FOR F5001 | | A | B | C |
| | J7105 | QNN0381-002 | PIN JACK,NI YWR | | A | B | C |
| | JS3001 | QSW0954-002 | ROTARY ENCODER,R.ENCODER | | A | B | C |
| | K2001 | NRSA02J-0R0X | MG RESISTOR,SET1 | 0Ω,1/10W | A | B | C |
| | K2002 | NRSA02J-0R0X | MG RESISTOR,SET1 | 0Ω,1/10W | A | B | C |
| | K2003 | NRSA02J-0R0X | MG RESISTOR,SET1 | 0Ω,1/10W | A | B | C |
| | K2004 | NRSA02J-0R0X | MG RESISTOR,SET1 | 0Ω,1/10W | A | B | C |
| | K2251 | NQR0007-001X | FERRITE BEADS | | A | B | C |
| | K2252 | NQR0007-001X | FERRITE BEADS | | A | B | C |
| | K2253 | NQR0007-001X | FERRITE BEADS | | A | B | C |
| | K5101 | QQR0678-001Z | FERRITE BEADS | | A | B | C |
| | K5102 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| ⚠ | LF5002 | QQR0978-001 | LINE FILTER | | A | B | C |
| | PC3001 | RPI-304J | IC(PHOTO SENSOR),SP REEL | | A | B | C |
| | PC3002 | RPI-304J | IC(PHOTO SENSOR),TU REEL | | A | B | C |
| ⚠ | PC5101 | PC123Y22 | IC(PHOTO COUPLER) | | A | B | C |
| | T2051 | PELN0832 | OSC TRANS | | A | B | C |
| ⚠ | T5001 | QQS0083-001 | SW TRANSF | | A | B | C |
| | TP106 | QUY160-100Y | IM BUS WIRE,PB FM | | A | B | C |
| | TP111 | QUY160-100Y | IM BUS WIRE,D.FF | | A | B | C |
| | TP2253 | QUY160-100Y | IM BUS WIRE,A.PB FM | | A | B | C |
| | TP2254 | QUY160-100Y | IM BUS WIRE,A.REC.FM | | A | B | C |
| | TP4001 | QUY160-100Y | IM BUS WIRE,CTL.P | | A | B | C |
| | TU6001 | QAU0261-002 | TUNER,15ALPS3SYS | | A | | C |
| | TU6001 | QAU0210-001 | TUNER,LG BG/L | | | B | |
| | X1 | QAX0576-001Z | CRYSTAL,PAL | | A | B | C |
| | X2 | QCBB1HK-103Y | C CAPACITOR,NTSC | 0.01µF,50V | A | B | C |
| | X3001 | QAX0445-001 | CRYSTAL,32K ADJ | | A | | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | X3001 | QAX0444-001 | CRYSTAL,32K ADJ | | | B | |
| | X3002 | QAX0527-001 | CRYSTAL,10M | | A | B | C |
| | S3001 | QSW0602-004 | PUSH SWITCH,REC.SAFETY | | A | B | C |
| | S3002 | QSW0602-004 | PUSH SWITCH,S.CASS | | A | B | C |
| | S7002 | QSW0456-002Z | TACT SWITCH,POWER | | A | B | C |
| | S7003 | QSW0456-002Z | TACT SWITCH,TIMER | | A | B | C |
| | S7004 | QSW0456-002Z | TACT SWITCH,REC LINK | | A | B | C |
| | S7006 | QSW0456-002Z | TACT SWITCH,SVHS ET | | A | B | C |
| | S7010 | QSW0456-002Z | TACT SWITCH,REC | | A | B | C |
| | S7011 | QSW0456-002Z | TACT SWITCH,PAUSE | | A | B | C |
| | S7013 | QSW0456-002Z | TACT SWITCH,STOP/EJ | | A | B | C |
| | S7015 | QSW0456-002Z | TACT SWITCH,PLAY | | A | B | C |
| | S7017 | QSW0456-002Z | TACT SWITCH,SP/LP/EP | | A | B | C |
| | SD1 | LP21105-001A | SHIELD CASE,FOR P/R | | A | B | C |
| | ET1 | PQ21623-2-5 | EARTH PLATE(RF),FOR TUNER | | A | B | C |
| | HS1 | LP40090-001A | HEAT SINK,FOR Q5101 | | A | B | C |
| | OT1 | QYTDSF3010Z | TAP SCREW,X2,FOR TERM_B | | A | B | C |
| | OT2 | PU59915-110 | #500SPACER0.014,R2041 | | A | B | C |
| | OT3 | QYTDST3006Z | TAP SCREW,FOR Q5101 | | A | B | C |
| | OT4 | PM30130-001 | SPACER,FOR WR6501 | | | B | |
| | WR6501 | QUB321-16A4A4 | SIN TWIST WIRE,W421-D2 | | | B | |
| | CN1 | QGF1201C2-09 | FPC CONNECTOR,DRUM 1-9 | | A | B | C |
| | CN901 | QGB2024K1-10S | B TO B CONNECTOR,TERMINAL | | A | B | C |
| | CN902 | QGB2024K1-12S | B TO B CONNECTOR,TERMINAL | | A | B | C |
| | CN903 | QGB2024K1-10S | B TO B CONNECTOR,TERMINAL | | A | B | C |
| | CN904 | QGB2024K1-11S | B TO B CONNECTOR,TERMINAL | | A | B | C |
| | CN905 | QGB2024K1-09S | B TO B CONNECTOR,TERMINAL | | A | B | C |
| | CN2001 | QGF1207C1-06 | FPC CONNECTOR,A/C HEAD | | A | B | C |
| | CN2002 | QGB2532J1-02 | B TO B CONNECTOR,FE HEAD | | A | B | C |
| | CN3001 | QGB2032M4-12 | B TO B CONNECTOR,CAP+DRUM M | | A | B | C |
| ⚠ | CN5001 | QGA7901C3-02 | W TO B CONNECTOR,POWER CORD | | A | B | C |
| | CN7002 | QGF1207C1-04 | FPC CONNECTOR,A.JOG V16 | | A | B | C |
| ⚠ | F5001 | QMF51E2-2R0-J1 | FUSE | T2.0A,AC250V | A | B | C |

**********

## 3D DIGITAL/2M BOARD ASSEMBLY<05>

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | PW1 | LPA10105-09A | 3D D/2M BOARD ASSY | | A | B | C |
| | IC1401 | JCP8026 | IC | | A | B | C |
| ⚠ | Q1401 | 2SC1317/RS/-T | TRANSISTOR | | A | B | C |
| | Q1402 | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q1402 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q1406 | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q1406 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q1408 | 2SC4081/S/-X | TRANSISTOR | | A | B | C |
| | Q1410 | 2SC4081/QRS/-X | TRANSISTOR | | A | B | C |
| | Q1410 or | 2PC4081/R/-X | TRANSISTOR | | A | B | C |
| | Q1412 | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q1412 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q1418 | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q1418 or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q1419 | DTC124TUA-X | DIGI TRANSISTOR | | A | B | C |
| | D1401 | RD4.3ES/B3/-T2 | Z DIODE | | A | B | C |
| | D1401 or | MTZJ4.3B-T2 | Z DIODE | | A | B | C |
| | D1402 | 1SS133-T2 | SI DIODE | | A | B | C |
| | D1402 or | 1N4148M-T2 | DIODE | | A | B | C |
| | R1401 | NRSA02J-121X | MG RESISTOR | 120Ω,1/10W | A | B | C |
| | R1402 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R1404 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A | B | C |
| | R1406 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A | B | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | R1410 | NRSA02J-391X | MG RESISTOR | 390Ω,1/10W | A | B | C |
| | R1411 | NRSA02J-152X | MG RESISTOR | 1.5kΩ,1/10W | A | B | C |
| | R1413 | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A | B | C |
| | R1415 | NRVA02D-221X | CMF RESISTOR | 220Ω,1/10W | A | B | C |
| | R1416 | NRSA02J-104X | MG RESISTOR | 100kΩ,1/10W | A | B | C |
| | R1417 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R1418 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A | B | C |
| | R1421 | NRSA02J-331X | MG RESISTOR | 330Ω,1/10W | A | B | C |
| | R1426 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | A | B | C |
| | R1427 | NRSA02J-333X | MG RESISTOR | 33kΩ,1/10W | A | B | C |
| | R1428 | NRSA02J-393X | MG RESISTOR | 39kΩ,1/10W | A | B | C |
| | R1429 | NRSA02J-182X | MG RESISTOR | 1.8kΩ,1/10W | A | B | C |
| | R1430 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | A | B | C |
| | R1431 | NRSA02J-821X | MG RESISTOR | 820Ω,1/10W | A | B | C |
| | R1433 | NRSA02J-510X | MG RESISTOR | 51Ω,1/10W | A | B | C |
| | R1434 | NRVA02D-153X | CMF RESISTOR | 15Ω,1/10W | A | B | C |
| | R1435 | NRVA02D-473X | CMF RESISTOR | 47kΩ,1/10W | A | B | C |
| | R1436 | NRVA02D-393X | CMF RESISTOR | 39Ω,1/10W | A | B | C |
| | R1437 | NRSA02J-392X | MG RESISTOR | 3.9kΩ,1/10W | A | B | C |
| | R1438 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A | B | C |
| | R1439 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | A | B | C |
| | R1440 | NRSA02J-473X | MG RESISTOR | 47kΩ,1/10W | A | B | C |
| | R1445 | NRVA02D-393X | CMF RESISTOR | 39Ω,1/10W | A | B | C |
| | R1446 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R1447 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R1448 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R1449 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R1450 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R1452 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A | B | C |
| | R1453 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R1455 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A | B | C |
| | R1459 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | A | B | C |
| | R1460 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | A | B | C |
| | VR1401 | QUY153-050Y | IM BUS WIRE | | | B | C |
| | B1401 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | B1412 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | C1401 | QEKJ1CM-336Z | E CAPACITOR | 33µF,16V | A | B | C |
| | C1403 | QEKJ0JM-337Z | E CAPACITOR | 330µF,6.3V | A | B | C |
| | C1404 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1405 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1406 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C1407 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C1408 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A | B | C |
| | C1410 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C1411 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1412 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C1413 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A | B | C |
| | C1415 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1416 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | B | C |
| | C1417 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1418 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C1421 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A | B | C |
| | C1422 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C1423 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1424 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C1425 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C1426 | NDC21HJ-390X | C CAPACITOR | 39pF,50V | A | B | C |
| | C1428 | NDC21HJ-220X | C CAPACITOR | 22pF,50V | A | B | C |
| | C1429 | QEKJ0JM-337Z | E CAPACITOR | 330µF,6.3V | A | B | C |
| | C1430 | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1432 | NCF21CZ-105X | C CAPACITOR | 1µF,16V | A | B | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|---|
| | C1433 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1435 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1436 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1437 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1438 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1439 | | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C1440 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1441 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1442 | | NCF21CZ-105X | C CAPACITOR | 1µF,16V | A | B | C |
| | C1444 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1445 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1446 | | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C1447 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1448 | | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C1449 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1450 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1451 | | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C1452 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1453 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1454 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1463 | | QEKJ0JM-336Z | E CAPACITOR | 33µF,6.3V | A | B | C |
| | C1468 | | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A | B | C |
| | C1470 | | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A | B | C |
| | C1471 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1472 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C1473 | | NCF21EZ-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | L1401 | | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L1402 | | QQL071J-6R8Y | INDUCTOR | 6.8µH | A | B | C |
| | L1403 | | QQL071J-6R8Y | INDUCTOR | 6.8µH | A | B | C |
| | L1404 | | QQL071J-6R8Y | INDUCTOR | 6.8µH | A | B | C |
| | L1405 | | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L1406 | | QQL071J-330Y | INDUCTOR | 33µH | A | B | C |
| | L1407 | | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L1409 | | QQL071J-1R0Y | INDUCTOR | 1.0µH | A | B | C |
| ⚠ | LC1401 | | QQL29BJ-101Z | P COIL,M/I | 100µH | A | B | C |
| | LC1402 | | QQR0521-006Z | NOISE FILTER | | A | B | C |
| | SD1 | | LP30706-001D | S.FRAME(S-VHS) | | A | B | C |
| | SD2 | | LP30684-001A | S.CASE(S-VHS) | | A | B | C |
| | CN1401 | | QGG2502K1-17 | HEADER PIN | | A | B | C |

************************************

## TERMINAL BOARD ASSEMBLY<06>

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | PW1 | | LPA10138-14A | TERM BOARD ASSY,EX/EK | | A | | C |
| | PW1 | | LPA10138-13A | TERM BOARD ASSY,EF | | | B | |
| | IC501 | | JCP8018 | IC | | A | B | C |
| | IC501 | or | JCP8028 | IC | | A | B | C |
| | IC501 | or | JCP8028-01 | IC | | A | B | C |
| | IC501 | or | JCP8038 | IC | | A | B | C |
| | IC502 | | VC2076DP | IC | | A | B | C |
| | IC901 | | BH7636S | IC,CH+ | | A | B | C |
| | Q901 | | UN5211-X | DIGI TRANSISTOR | | A | B | C |
| | Q901 | or | DTC114EUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q901 | or | RN1302-X | DIGI TRANSISTOR | | A | B | C |
| | Q901 | or | PDTC114EU-X | DIGI TRANSISTOR | | A | B | C |
| | Q902 | | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q902 | or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q902 | or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q903 | | 2SB1218A/QR/-X | TRANSISTOR,S OUT | | A | B | C |
| | Q903 | or | 2SA1576A/QR/-X | TRANSISTOR,S OUT | | A | B | C |
| | Q903 | or | 2PA1576/R/-X | TRANSISTOR,S OUT | | A | B | C |
| | Q904 | | 2SB1218A/QR/-X | TRANSISTOR,S OUT | | A | B | C |
| | Q904 | or | 2SA1576A/QR/-X | TRANSISTOR,S OUT | | A | B | C |
| | Q904 | or | 2PA1576/R/-X | TRANSISTOR,S OUT | | A | B | C |
| | Q905 | | UN521E-X | DIGI TRANSISTOR | | A | B | C |
| | Q905 | or | DTC144WUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q905 | or | RN1309-X | DIGI TRANSISTOR | | A | B | C |
| | Q905 | or | PDTC144WU-X | DIGI TRANSISTOR | | A | B | C |
| | Q906 | | 2SD1819A/QRS/-X | TRANSISTOR | | A | B | C |
| | Q906 | or | 2SC4081/QRS/-X | TRANSISTOR | | A | B | C |
| | Q906 | or | 2PC4081/R/-X | TRANSISTOR | | A | B | C |
| | Q907 | | 2SD1819A/QRS/-X | TRANSISTOR | | A | B | C |
| | Q907 | or | 2SC4081/QRS/-X | TRANSISTOR | | A | B | C |
| | Q907 | or | 2PC4081/R/-X | TRANSISTOR | | A | B | C |
| | Q908 | | 2SD1819A/QRS/-X | TRANSISTOR | | A | B | C |
| | Q908 | or | 2SC4081/QRS/-X | TRANSISTOR | | A | B | C |
| | Q908 | or | 2PC4081/R/-X | TRANSISTOR | | A | B | C |
| | Q909 | | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q909 | or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q909 | or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q910 | | 2SB1218A/QR/-X | TRANSISTOR | | A | B | C |
| | Q910 | or | 2SA1576A/QR/-X | TRANSISTOR | | A | B | C |
| | Q910 | or | 2PA1576/R/-X | TRANSISTOR | | A | B | C |
| | Q911 | | UN521E-X | DIGI TRANSISTOR | | A | B | C |
| | Q911 | or | DTC144WUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q911 | or | RN1309-X | DIGI TRANSISTOR | | A | B | C |
| | Q911 | or | PDTC144WU-X | DIGI TRANSISTOR | | A | B | C |
| | Q912 | | UN5215-X | DIGI TRANSISTOR | | A | B | C |
| | Q912 | or | DTC114TUA-X | DIGI TRANSISTOR | | A | B | C |
| | Q912 | or | RN1311-X | D TRANSISTOR | | A | B | C |
| | Q912 | or | PDTC114TU-X | DIGI TRANSISTOR | | A | B | C |
| | R503 | | NRSA02J-221X | MG RESISTOR | 220Ω,1/10W | A | B | C |
| | R504 | | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A | B | C |
| | R505 | | NRSA02J-392X | MG RESISTOR | 3.9kΩ,1/10W | A | B | C |
| | R506 | | NRSA02J-391X | MG RESISTOR | 390Ω,1/10W | A | B | C |
| | R507 | | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | A | B | C |
| | R508 | | NRSA02J-151X | MG RESISTOR | 150Ω,1/10W | A | B | C |
| | R509 | | NRSA02J-162X | MG RESISTOR | 1.6kΩ,1/10W | A | B | C |
| | R510 | | NRVA02D-102X | CMF RESISTOR | 1kΩ,1/10W | A | B | C |
| | R511 | | NRVA02D-471X | CMF RESISTOR | 470Ω,1/10W | A | B | C |
| | R512 | | NRVA02D-102X | CMF RESISTOR | 1kΩ,1/10W | A | B | C |
| | R513 | | NRVA02D-152X | CMF RESISTOR | 1.5kΩ,1/10W | A | B | C |
| | R514 | | NRVA02D-332X | CMF RESISTOR | 3.3kΩ,1/10W | A | B | C |
| | R515 | | NRVA02D-332X | CMF RESISTOR | 3.3kΩ,1/10W | A | B | C |
| | R516 | | QUY160-100Y | IM BUS WIRE | | A | B | C |
| | R517 | | QUY160-100Y | IM BUS WIRE | | A | B | C |
| | R525 | | QRE141J-125Y | C RESISTOR | 1.2MΩ,1/4W | A | B | C |
| | R527 | | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A | | C |
| | R531 | | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R532 | | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R533 | | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R534 | | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R535 | | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R536 | | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R901 | | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R902 | | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R903 | | QRE141J-680Y | C RESISTOR | 68Ω,1/4W | A | B | C |
| | R904 | | NQL402M-4R7X | INDUCTOR | 4.7µH | A | B | C |
| | R905 | | NQL402M-4R7X | INDUCTOR | 4.7µH | A | B | C |
| | R906 | | QQL231J-100Y | INDUCTOR | 10µH | A | B | C |
| | R907 | | QQL231J-100Y | INDUCTOR | 10µH | A | B | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | R908 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | R909 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R910 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R911 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R912 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R913 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R914 | QQL231J-100Y | INDUCTOR | 10µH | A | B | C |
| | R915 | QQL231J-100Y | INDUCTOR | 10µH | A | B | C |
| | R916 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R917 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | R918 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | R919 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R920 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R921 | QRE121J-391Y | C RESISTOR | 390Ω,1/2W | A | B | C |
| | R922 | QRE121J-391Y | C RESISTOR | 390Ω,1/2W | A | B | C |
| | R923 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R924 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R929 | NRSA02J-820X | MG RESISTOR | 82Ω,1/10W | A | B | C |
| | R930 | NRSA02J-750X | MG RESISTOR | 75Ω,1/10W | A | B | C |
| | R931 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | R932 | NRSA02J-511X | MG RESISTOR | 510Ω,1/10W | A | B | C |
| | R933 | NRSA02J-471X | MG RESISTOR | 470Ω1/10W | A | B | C |
| | R934 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R935 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R936 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R937 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R938 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R939 | QRE141J-101Y | C RESISTOR | 100Ω,1/4W | A | B | C |
| | R940 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | A | B | C |
| | R941 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A | B | C |
| | R942 | NRSA02J-472X | MG RESISTOR | 4.7kΩ,1/10W | A | B | C |
| | R943 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | A | B | C |
| | R944 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | A | B | C |
| | R945 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | A | B | C |
| | R946 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | A | B | C |
| | R947 | NRSA02J-682X | MG RESISTOR | 6.8kΩ,1/10W | A | B | C |
| | R949 | QRE121J-331Y | C RESISTOR | 330Ω,1/2W | A | B | C |
| | R951 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | A | B | C |
| | R952 | NRSA02J-562X | MG RESISTOR | 5.6kΩ,1/10W | A | B | C |
| | R953 | NRSA02J-562X | MG RESISTOR | 5.6kΩ,1/10W | A | B | C |
| | R964 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | A | B | C |
| | C501 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A | B | C |
| | C502 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C503 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A | B | C |
| | C504 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C505 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C506 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C507 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C508 | QEKJ1HM-474Z | E CAPACITOR | 0.47µF,50V | A | B | C |
| | C509 | QEKJ1CM-106Z | E CAPACITOR | 10µF,16V | A | B | C |
| | C510 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C511 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C512 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C513 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C514 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C515 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C516 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C518 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | A | B | C |
| | C519 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A | B | C |
| | C520 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C521 | QEKJ1HM-475Z | E CAPACITOR | 4.7µF,25V | A | B | C |
| | C522 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A | B | C |
| | C523 | QEKJ1HM-225Z | E CAPACITOR | 2.2µF,50V | A | B | C |
| | C524 | NDC21HG-301X | C CAPACITOR | 300pF,50V | A | B | C |
| | C525 | NDC21HG-301X | C CAPACITOR | 300pF,50V | A | B | C |
| | C526 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A | B | C |
| | C527 | NDC21HJ-181X | C CAPACITOR | 180pF,50V | A | B | C |
| | C528 | NDC21HG-271X | C CAPACITOR | 270pF,50V | A | B | C |
| | C529 | NDC21HG-820X | C CAPACITOR | 82pF,50V | A | B | C |
| | C530 | NDC21HG-221X | C CAPACITOR | 220pF,50V | A | B | C |
| | C531 | NDC21HG-301X | C CAPACITOR | 300pF,50V | A | B | C |
| | C532 | NDC21HG-301X | C CAPACITOR | 300pF,50V | A | B | C |
| | C533 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C534 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | A | B | C |
| | C535 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C551 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C553 | QCBB1HK-103Y | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C554 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C556 | QCBB1HK-103Y | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C557 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C559 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C560 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C561 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | A | B | C |
| | C562 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | | B | |
| | C563 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | | C |
| | C564 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | | B | |
| | C566 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | | B | |
| | C568 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C569 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C570 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C571 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C572 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C573 | NDC21HJ-680X | C CAPACITOR | 68pF,50V | A | B | C |
| | C575 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | A | B | C |
| | C901 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C902 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C903 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C904 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C905 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C906 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C907 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C908 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C910 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | A | B | C |
| | C912 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | A | B | C |
| | C913 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C914 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C915 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C916 | NCB21HK-223X | C CAPACITOR | 0.022µF,50V | A | B | C |
| | C917 | NCB21HK-223X | C CAPACITOR | 0.022µF,50V | A | B | C |
| | C918 | QCBB1HK-223Y | C CAPACITOR | 0.22µF,50V | A | B | C |
| | C921 | NDC21HJ-330X | C CAPACITOR | 33pF,50V | A | B | C |
| | C923 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | A | B | C |
| | C924 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C925 | NCB21HK-223X | C CAPACITOR | 0.022µF,50V | A | B | C |
| | C927 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | A | B | C |
| | C928 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | A | B | C |
| | C931 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | B | C |
| | C935 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C936 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C937 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C938 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C939 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| | C940 | NCB21HK-471X | C CAPACITOR | 470pF,50V | A | B | C |
| | C941 | QEKJ0JM-227Z | E CAPACITOR | 220µF,6.3V | A | B | C |
| | C942 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | A | B | C |
| | C943 | QEKJ1CM-107Z | E CAPACITOR | 100µF,16V | A | B | C |
| | C945 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | B | C |
| | C946 | QEKJ1EM-106Z | E CAPACITOR | 10µF,25V | A | B | C |
| | C950 | QEKJ0JM-227Z | E CAPACITOR | 220µF,6.3V | A | B | C |
| | C951 | QEKC1CM-476Z | E CAPACITOR | 47µF,16V | A | B | C |
| | C958 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | C959 | NCB21HK-331X | C CAPACITOR | 330pF,50V | A | B | C |
| | L501 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L503 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L504 | QQL29BJ-100Z | P COIL | 10µH | A | B | C |
| | L505 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L901 | QQL231J-R22Y | INDUCTOR | 0.22µH | A | B | C |
| | L902 | QQL071J-1R0Y | INDUCTOR | 1.0µH | A | B | C |
| | L903 | QQL071J-150Y | INDUCTOR | 15µH | A | B | C |
| | L904 | QQL071J-150Y | INDUCTOR | 15µH | A | B | C |
| | L906 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L907 | QUY153-050Y | IM BUS WIRE | | A | B | C |
| | L910 | QQL071J-1R0Y | INDUCTOR | 1.0µH | A | B | C |
| | L913 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L914 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L915 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L916 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L917 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L918 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L919 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | L920 | QQL071J-4R7Y | INDUCTOR | 4.7µH | A | B | C |
| | J901 | PEMC1177 | RGB21PIN SOCKET,AV1 | | A | B | C |
| | J902 | PEMC1177 | RGB21PIN SOCKET,AV2 | | A | B | C |
| | J904 | QND0084-001 | S JACK,S OUT | | A | B | C |
| | J915 | QNN0418-003 | PIN JACK,A.OUT(L) | | A | B | C |
| | J916 | QNN0418-002 | PIN JACK,A.OUT(R) | | A | B | C |
| | J921 | PU60659 | MINI JACK,SAT.CTL | | A | B | C |
| ⚠ | TB1 | LP21028-006A | TERMINAL BOARD | | A | B | C |
| | ET1 | LP30918-001A | EARTH PLATE,FOR EMC | | A | B | C |
| | ET2 | LP30915-001A | EARTH PLATE | | A | B | C |
| | OT1 | QYTDSF3008Z | TAP SCREW,X6 | | A | B | C |
| | CN511 | QGF1208F1-11 | FPC CONNECTOR,P/S CONV | | | B | |
| | CN911 | QGB2024J1-10S | B TO B CONNECTOR | | A | B | C |
| | CN912 | QGB2024J1-12S | B TO B CONNECTOR | | A | B | C |
| | CN913 | QGB2024J1-10S | B TO B CONNECTOR | | A | B | C |
| | CN914 | QGB2024J1-11S | B TO B CONNECTOR | | A | B | C |
| | CN915 | QGB2024J1-09S | B TO B CONNECTOR | | A | B | C |
| | CN916 | QGF1208F1-04 | FPC CONNECTOR,FRONT S IN | | A | B | C |

**********

## A/C HEAD BOARD ASSEMBLY<12>

| | | | | | | |
|---|---|---|---|---|---|---|
| PW1 | LPA10158-01A1 | A/C HEAD BOARD ASSY | | A | B | C |

**********

## DEMOD BOARD ASSEMBLY<14>

| | | | | | |
|---|---|---|---|---|---|
| PW1 | LPA10094-09A | DEMOD BOARD ASSY | A | | C |
| PW1 | LPA10094-10B | DEMOD BOARD ASSY | | B | |
| IC6701 | MSP3417GQGB8V3X | IC | A | B | C |
| IC6701 or | MSP3417G-X | IC | A | B | C |
| IC6701 or | MSP3417D-X | IC | A | B | C |
| Q6701 | 2SC3936/BC/-X | TRANSISTOR | A | B | C |
| D6701 | 1SS133-T2 | SI DIODE | A | B | C |
| D6701 or | 1N4148M-T2 | DIODE | A | B | C |
| R6701 | NRSA02J-392X | MG RESISTOR 3.9kΩ,1/10W | A | B | C |
| R6702 | NRSA02J-682X | MG RESISTOR 6.8kΩ,1/10W | A | B | C |
| R6703 | NRSA02J-0R0X | MG RESISTOR 0Ω,1/10W | A | B | C |
| R6704 | NRSA02J-102X | MG RESISTOR 1kΩ,1/10W | A | B | C |
| R6705 | NRSA02J-271X | MG RESISTOR 270Ω,1/10W | A | B | C |
| R6707 | NQR0200-003X | FERRITE BEADS | A | B | C |
| R6708 | NQR0200-003X | FERRITE BEADS | A | B | C |
| R6709 | NQR0200-003X | FERRITE BEADS | A | B | C |
| R6710 | NQR0200-003X | FERRITE BEADS | A | B | C |
| R6711 | NRSA02J-104X | MG RESISTOR 100kΩ,1/10W | A | B | C |
| R6712 | NRSA02J-102X | MG RESISTOR 1kΩ,1/10W | A | B | C |
| R6713 | NRSA02J-123X | MG RESISTOR 12kΩ,1/10W | A | B | C |
| R6714 | NRSA02J-102X | MG RESISTOR 1kΩ,1/10W | A | B | C |
| R6715 | NRSA02J-123X | MG RESISTOR 12kΩ,1/10W | A | B | C |
| R6716 | NQR0200-003X | FERRITE BEADS | A | B | C |
| R6719 | QRE141J-103Y | C RESISTOR 10kΩ,1/4W | A | B | C |
| R6720 | NRSA02J-562X | MG RESISTOR 5.6kΩ,1/10W | A | B | C |
| R6721 | NRSA02J-562X | MG RESISTOR 5.6kΩ,1/10W | A | B | C |
| C6701 | NCB21HK-103X | C CAPACITOR 0.01µF,50V | A | B | C |
| C6704 | NCB21HK-103X | C CAPACITOR 0.01µF,50V | A | B | C |
| C6707 | NDC21HJ-470X | C CAPACITOR 47pF,50V | A | B | C |
| C6708 | NDC21HJ-7R0X | C CAPACITOR 7pF,50V | A | B | C |
| C6709 | NDC21HJ-3R0X | C CAPACITOR 3pF,50V | A | B | C |
| C6713 | NCF21CZ-224X | C CAPACITOR 0.22µF,16V | A | B | C |
| C6714 | NCB21HK-222X | C CAPACITOR 0.0022µF,50V | A | | C |
| C6714 | NCB21HK-682X | C CAPACITOR 0.0068µF,50V | | B | |
| C6715 | QEKJ1HM-225Z | E CAPACITOR 2.2µF,50V | A | B | C |
| C6716 | NCB21HK-222X | C CAPACITOR 0.0022µF,50V | A | | C |
| C6716 | NCB21HK-682X | C CAPACITOR 0.0068µF,50V | | B | |
| C6717 | QEKJ1HM-225Z | E CAPACITOR 2.2µF,50V | A | B | C |
| C6719 | QEKJ1EM-106Z | E CAPACITOR 10µF,25V | A | B | C |
| C6720 | QEKJ1EM-106Z | E CAPACITOR 10µF,25V | A | B | C |
| C6721 | NCB21HK-103X | C CAPACITOR 0.01µF,50V | A | B | C |
| C6723 | NCB21HK-103X | C CAPACITOR 0.01µF,50V | A | B | C |
| C6724 | QEKJ1HM-225Z | E CAPACITOR 2.2µF,50V | | B | |
| L6701 | QUY153-050Y | IM BUS WIRE | A | B | C |
| X6701 | QAX0443-001 | CRYSTAL 18.432MHz | A | B | C |
| K6701 | NRSA02J-330X | MG RESISTOR 33Ω,1/10W | A | B | C |
| K6702 | NQR0200-003X | FERRITE BEADS | A | B | C |
| K6703 | NRSA02J-103X | MG RESISTOR 10kΩ,1/10W | A | | C |
| K6703 | NRSA02J-0R0X | MG RESISTOR 0Ω,1/10W | | B | |
| K6704 | NRSA02J-0R0X | MG RESISTOR 0Ω,1/10W | A | B | C |
| K6705 | NRSA02J-0R0X | MG RESISTOR 0Ω,1/10W | A | | C |
| K6705 | NRSA02J-100X | MG RESISTOR 10Ω,1/10W | | B | |
| K6706 | NRSA02J-470X | MG RESISTOR 47Ω,1/10W | A | B | C |
| K6707 | NQR0200-003X | FERRITE BEADS,MS ONLY | | B | |
| BK1 | LP40425-001A | BRACKET(PWB) | A | B | C |
| CN6701 | QGG2502K1-10 | HEADER PIN | A | B | C |

**********

## S JACK BOARD ASSEMBLY<36>

| | | | | | |
|---|---|---|---|---|---|
| PW1 | LPA20009-02B | S JACK BOARD ASSY | A | B | C |
| J7102 | QND0084-001 | S JACK | A | B | C |
| CN7108 | QGF1209F1-04 | FPC CONNECTOR | A | B | C |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! | REF No. | PART No. | PART NAME, DESCRIPTION | | A | B | C |
|---|---|---|---|---|---|---|---|
| ********** | | | | | | | |
| | | | **ADV. JOG BOARD ASSEMBLY<39>** | | | | |
| | PW1 | LPA10191-03A | ADV JOG BOARD ASSY | | A | B | C |
| | R7047 | QRE141J-472Y | C RESISTOR | 4.7kΩ,1/4W | A | B | C |
| | UN7001 | QSW0938-001 | ROTARY ENCODER,400K | | A | B | C |
| | S7030 | QSW0456-002Z | TACT SWITCH,24H EXP | | A | B | C |
| | CN7004 | QGF1209F1-04 | FPC CONNECTOR,1-4 | | A | B | C |
| ********** | | | | | | | |
| | | | **LOADING MOTOR BOARD ASSEMBLY<55>** | | | | |
| | PW2 | LPA10158-01A2 | LOADING MOTOR BOARD ASSY | | A | B | C |
| ********** | | | | | | | |
| | | | **S-P CONVERTER BOARD ASSEMBLY<87> [FOR HR-S7965EF]** | | | | |
| | PW1 | LPA10144-06A | S-P CONV BOARD ASSY,S->P CONV | | | B | |
| | IC1601 | BA7046F-XE | IC | | | B | |
| | IC1602 | 74HC132D-X | IC(DIGITAL) | | | B | |
| | IC1603 | 74HC4538D-X | IC | | | B | |
| | IC1604 | 74HC74D-X | IC | | | B | |
| | IC1605 | TDA8395 | IC | | | B | |
| | IC1606 | TDA4665T-X | IC | | | B | |
| | IC1607 | TDA8501T/N1-X | IC | | | B | |
| | Q1601 | 2SB1218A/QR/-X | TRANSISTOR | | | B | |
| | Q1601 or | 2SA1576A/QR/-X | TRANSISTOR | | | B | |
| | Q1601 or | 2PA1576/R/-X | TRANSISTOR | | | B | |
| | Q1604 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1604 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1604 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1605 | 2SB1218A/QR/-X | TRANSISTOR | | | B | |
| | Q1605 or | 2SA1576A/QR/-X | TRANSISTOR | | | B | |
| | Q1605 or | 2PA1576/R/-X | TRANSISTOR | | | B | |
| | Q1606 | 2SC1740S/QRS/-T | TRANSISTOR | | | B | |
| | Q1607 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1607 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1607 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1608 | 2SB1218A/QR/-X | TRANSISTOR | | | B | |
| | Q1608 or | 2SA1576A/QR/-X | TRANSISTOR | | | B | |
| | Q1608 or | 2PA1576/R/-X | TRANSISTOR | | | B | |
| | Q1609 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1609 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1609 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1610 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1610 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1610 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1611 | 2SB1218A/QR/-X | TRANSISTOR | | | B | |
| | Q1611 or | 2SA1576A/QR/-X | TRANSISTOR | | | B | |
| | Q1611 or | 2PA1576/R/-X | TRANSISTOR | | | B | |
| | Q1612 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1612 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1612 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1613 | 2SC4083/NP/-X | TRANSISTOR | | | B | |
| | Q1614 | 2SB1218A/QR/-X | TRANSISTOR | | | B | |
| | Q1614 or | 2SA1576A/QR/-X | TRANSISTOR | | | B | |
| | Q1614 or | 2PA1576/R/-X | TRANSISTOR | | | B | |
| | Q1615 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1615 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1615 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1616 | 2SD1819A/QRS/-X | TRANSISTOR | | | B | |
| | Q1616 or | 2SC4081/QRS/-X | TRANSISTOR | | | B | |
| | Q1616 or | 2PC4081/R/-X | TRANSISTOR | | | B | |
| | Q1617 | 2SB1218A/QR/-X | TRANSISTOR | | | B | |
| | Q1617 or | 2SA1576A/QR/-X | TRANSISTOR | | | B | |
| | Q1617 or | 2PA1576/R/-X | TRANSISTOR | | | B | |
| | Q1619 | DTA143TUA-X | DIGI TRANSISTOR | | | B | |
| | D1601 | 1SS133-T2 | SI DIODE | | | B | |
| | R1601 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | | B | |
| | R1608 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | | B | |
| | R1609 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1610 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1611 | NRSA02J-272X | MG RESISTOR | 2.7kΩ,1/10W | | B | |
| | R1612 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | | B | |
| | R1615 | NRSA02J-331X | MG RESISTOR | 330Ω,1/10W | | B | |
| | R1616 | NRSA02J-474X | MG RESISTOR | 470kΩ,1/10W | | B | |
| | R1617 | NRSA02J-474X | MG RESISTOR | 470kΩ,1/10W | | B | |
| | R1618 | NRSA02J-103X | MG RESISTOR | 10kΩ,1/10W | | B | |
| | R1619 | NRSA02J-134X | MG RESISTOR | 130kΩ,1/10W | | B | |
| | R1620 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | | B | |
| | R1621 | QRE141J-103Y | C RESISTOR | 10kΩ,1/4W | | B | |
| | R1622 | QRE141J-103Y | C RESISTOR | 10kΩ,1/4W | | B | |
| | R1623 | NRSA02J-123X | MG RESISTOR | 12kΩ,1/10W | | B | |
| | R1624 | NRSA02J-124X | MG RESISTOR | 120kΩ,1/10W | | B | |
| | R1631 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | | B | |
| | R1632 | NRSA02J-332X | MG RESISTOR | 3.3kΩ,1/10W | | B | |
| | R1633 | NRSA02J-223X | MG RESISTOR | 22kΩ,1/10W | | B | |
| | R1635 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | | B | |
| | R1636 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1637 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | | B | |
| | R1638 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | | B | |
| | R1639 | NRSA02J-331X | MG RESISTOR | 330Ω,1/10W | | B | |
| | R1640 | NRSA02J-122X | MG RESISTOR | 1.2kΩ,1/10W | | B | |
| | R1641 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1642 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | | B | |
| | R1643 | NRSA02J-101X | MG RESISTOR | 100Ω,1/10W | | B | |
| | R1644 | NRSA02J-331X | MG RESISTOR | 330Ω,1/10W | | B | |
| | R1645 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | | B | |
| | R1646 | NRSA02J-104X | MG RESISTOR | 100kΩ,1/10W | | B | |
| | R1647 | NRSA02J-152X | MG RESISTOR | 1.5kΩ,1/10W | | B | |
| | R1648 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1651 | NRSA02J-123X | MG RESISTOR | 12kΩ,1/10W | | B | |
| | R1652 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1653 | NRSA02J-184X | MG RESISTOR | 180kΩ,1/10W | | B | |
| | R1654 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | | B | |
| | R1655 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1656 | NRSA02J-222X | MG RESISTOR | 2.2kΩ,1/10W | | B | |
| | R1657 | NRSA02J-561X | MG RESISTOR | 560Ω,1/10W | | B | |
| | R1658 | NRSA02J-102X | MG RESISTOR | 1kΩ,1/10W | | B | |
| | R1659 | NRSA02J-681X | MG RESISTOR | 680Ω,1/10W | | B | |
| | R1660 | NRSA02J-273X | MG RESISTOR | 27kΩ,1/10W | | B | |
| | R1661 | NRSA02J-333X | MG RESISTOR | 33kΩ,1/10W | | B | |
| | VR1601 | QVP0039-471Z | TRIM RESISTOR | | | B | |
| | VR1602 | QVP0039-471Z | TRIM RESISTOR | | | B | |
| | VR1603 | QVP0039-104Z | TRIM RESISTOR | | | B | |
| | B1601 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | | B | |
| | B1602 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | | B | |
| | B1603 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | | B | |

| MODEL | MARK |
|---|---|
| HR-S7960EX | A |
| HR-S7965EF | B |
| HR-S7965EK | C |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | | A B C |
|---|---|---|---|---|
| B1607 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | B |
| B1608 | NRSA02J-0R0X | MG RESISTOR | 0Ω,1/10W | B |
| C1601 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | B |
| C1602 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1605 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | B |
| C1606 | NCB21HK-102X | C CAPACITOR | 0.001µF,50V | B |
| C1607 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1608 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | B |
| C1609 | NCB21HK-222X | C CAPACITOR | 0.0022µF,50V | B |
| C1610 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | B |
| C1611 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | B |
| C1612 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | B |
| C1613 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | B |
| C1614 | NDC21HJ-471X | C CAPACITOR | 470pF,50V | B |
| C1615 | NDC21HJ-561X | C CAPACITOR | 560pF,50V | B |
| C1616 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | B |
| C1631 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | B |
| C1632 | QEKJ1CM-476Z | E CAPACITOR | 47µF,16V | B |
| C1633 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1634 | NDC21HJ-101X | C CAPACITOR | 100pF,50V | B |
| C1635 | NCB21EK-104X | C CAPACITOR | 0.1µF,25V | B |
| C1636 | NCB21CK-224X | C CAPACITOR | 0.22µF,16V | B |
| C1637 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1638 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | B |
| C1639 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1640 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | B |
| C1641 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1642 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1643 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1644 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1645 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | B |
| C1646 | QEKJ1HM-105Z | E CAPACITOR | 1µF,50V | B |
| C1647 | NCB21CK-224X | C CAPACITOR | 0.22µF,16V | B |
| C1648 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | B |
| C1649 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1650 | NCB21CK-224X | C CAPACITOR | 0.22µF,16V | B |
| C1651 | NCB21EK-223X | C CAPACITOR | 0.022µF,25V | B |
| C1652 | NDC21HJ-120X | C CAPACITOR | 12pF,50V | B |
| C1653 | NCB21CK-224X | C CAPACITOR | 0.22µF,16V | B |
| C1654 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| C1655 | QEKJ0JM-476Z | E CAPACITOR | 47µF,6.3V | B |
| C1656 | NCB21HK-103X | C CAPACITOR | 0.01µF,50V | B |
| L1601 | QQL29BJ-100Z | P COIL | 10µH | B |
| L1602 | QQL29BJ-100Z | P COIL | 10µH | B |
| L1603 | QQL29BJ-100Z | P COIL | 10µH | B |
| L1604 | QQL29BJ-100Z | P COIL | 10µH | B |
| FL1601 | QQR1187-001 | EQ | | B |
| FL1602 | QQR1187-001 | EQ | | B |
| X1601 | QAX0613-001Z | CRYSTAL | 4.433619MHz | B |
| BK1 | LP30950-001A | BRACKET(1) | | B |
| BK2 | LP30951-001A | BRACKET(2) | | B |
| OT1 | PU59915-105 | #500SPACER0.01,FOR X1601 | | B |
| CN1601 | QGF1208F1-11 | FPC CONNECTOR | | B |

| #! REF No. | PART No. | PART NAME, DESCRIPTION | A B C |
|---|---|---|---|